

This document gives pertinent information concerning reissuance of the VPDES Permit listed below. This permit is being processed as a Minor, Municipal permit. The discharge results from the operation of a 0.025 MGD wastewater treatment plant with additional design flow tier of 0.040 MGD. This permit action consists of updating the proposed effluent limits to reflect the current Virginia WQS (effective January 6, 2011) and updating permit language as appropriate. The effluent limitations and special conditions contained in this permit will maintain the Water Quality Standards of 9VAC25-260 et seq.

1. Facility Name and Mailing Address: Woodford MHC, LLC STP
10006 Hammock Bend
Chapel Hill, NC 27517

Facility Location: 12392 Cousteau Street,
Woodford, VA 22580

Facility Contact Name: Matthew Raynor

SIC Code : 4952 WWTP

Telephone Number: 919-960-5739
Email Address: Tarmatt@aol.com
2. Permit No.: VA0061409

Other VPDES Permits associated with this facility: VAN030156 (Pending)

Other Permits associated with this facility: None

E2/E3/E4 Status: N/A

Expiration Date of previous permit: December 28, 2011
3. Owner Name: Woodford MHC, LLC
Owner Contact/Title: Matthew Raynor
Environmental Director

Telephone Number: 919-960-5739
4. Application Complete Date: September 15, 2011
Permit Drafted By: Joan C. Crowther
Date Drafted: April 9, 2012
Draft Permit Reviewed By: Alison Thompson
Date Reviewed: April 17, 2012
WPM Review By: Bryant Thomas
Date Reviewed: April 25, 2012
Public Comment Period : Start Date: May 22, 2012
End Date: June 21, 2012
5. Receiving Waters Information: See Attachment 1 for the Flow Frequency Determination, Updated 5/8/12

Receiving Stream Name : Motto River, UT
Drainage Area at Outfall: 1.34 sq.mi.*
River Mile: 3.1

* Drainage Area was revised based on Planning Statement dated 10/25/11.
Stream Code: 8-XCF

Stream Basin: York River
Subbasin: None
Section: 3
Stream Class: III
Special Standards: None
Waterbody ID: VAN-F19R
7Q10 Low Flow: 0.0 MGD
7Q10 High Flow: 0.012 MGD
1Q10 Low Flow: 0.0 MGD
1Q10 High Flow: 0.0063 MGD
30Q10 Low Flow: 0.0 MGD
30Q10 High Flow: 0.043 MGD
Harmonic Mean Flow: 0.0 MGD
30Q5 Flow: 0.0 MGD
303(d) Listed (Receiving Stream): No
303(d) (Downstream): Yes (*E.coli*)
TMDL (Receiving Stream): No
TMDL (Downstream): No (Due by 2016)
Date TMDL Approved (Receiving Stream): Not Applicable
Date TMDL Approved (Downstream): Not Applicable

6. Statutory or Regulatory Basis for Special Conditions and Effluent Limitations:

- | | |
|---|---|
| <input checked="" type="checkbox"/> State Water Control Law | <input checked="" type="checkbox"/> EPA Guidelines |
| <input checked="" type="checkbox"/> Clean Water Act | <input checked="" type="checkbox"/> Water Quality Standards |
| <input checked="" type="checkbox"/> VPDES Permit Regulation | <input type="checkbox"/> Other |
| <input checked="" type="checkbox"/> EPA NPDES Regulation | |

7. Licensed Operator Requirements: Class IV

8. Reliability Class: Class III

9. Permit Characterization:

- | | | |
|---|---|---|
| <input checked="" type="checkbox"/> Private | <input type="checkbox"/> Effluent Limited | <input type="checkbox"/> Possible Interstate Effect |
| <input type="checkbox"/> Federal | <input checked="" type="checkbox"/> Water Quality Limited | <input type="checkbox"/> Compliance Schedule Required |
| <input type="checkbox"/> State | <input type="checkbox"/> Toxics Monitoring Program Required | <input type="checkbox"/> Interim Limits in Permit |
| <input type="checkbox"/> POTW | <input type="checkbox"/> Pretreatment Program Required | <input type="checkbox"/> Interim Limits in Other Document |
| <input checked="" type="checkbox"/> TMDL | | |

10. Wastewater Sources and Treatment Description:

This facility is a privately owned wastewater treatment plant serving a mobile home park with approximately 56 homes. The permittee has requested an additional tier design flow of 0.040 MGD for this permit reissuance.

The wastewater treatment plant consists of a comminutor, aeration basin, clarification basin, chlorination, dechlorination and post aeration.

See Attachment 2 for a facility schematic/diagram.

TABLE 1 – Outfall Description

Outfall Number	Discharge Sources	Treatment	Design Flows	Outfall Latitude and Longitude
001	Domestic Wastewater	See Item 10 above.	0.025 MGD 0.040 MGD	38° 5' 24" N 77° 31' 11" W

170D - Ladysmith**11. Sludge Treatment and Disposal Methods:**

The aerobic digested sludge is pumped and hauled by an independent contractor to the Massaponax Wastewater Treatment Plant (VA0025658) in Spotsylvania County, Virginia for disposal.

12. Discharges, Intakes, Monitoring Stations, Other Items in Vicinity of Discharge:

There are no DEQ ambient water quality monitoring stations or VPDES Permitted facilities within a 2-mile radius of this facility. There are no drinking water intakes within a 5-mile radius of this facility

13. Material Storage:

TABLE 3 - Material Storage		
Materials Description	Volume Stored	Spill/Stormwater Prevention Measures
Bio-Max Norweco Dechloro	3-4, 45 lbs	Stored in concrete building.
Hypochlorite Solution	30 gallon tank	Chemical is stored off-site.

14. Site Inspection:

Performed by Beth Biller, DEQ Water Compliance Staff, on February 19, 2008. (see Attachment 3).

15. Receiving Stream Water Quality and Water Quality Standards:a) Ambient Water Quality Data

The unnamed tributary to the Motto River (XCF) flows into the Motto River, which flows into South River. The nearest downstream DEQ monitoring station with ambient data is Station 8-STH004.37, located on South River at the Route 638 bridge crossing. This station is located approximately 7.53 rivermiles downstream from this facility. This ambient water quality station is located within the York River Basin designated as Class III waters and in Section 3. The following is a monitoring summary for Station 8-STH004.37 as taken from the 2010 Integrated Assessment:

E. coli monitoring finds a bacterial impairment, resulting in an impaired classification for the recreation use. The wildlife and aquatic life uses are considered fully supporting. The fish consumption use was not assessed.

The NRO planning statement can be found as Attachment 4.

Significant portions of the Chesapeake Bay and its tributaries are listed as impaired on Virginia's 303(d) list of impaired waters for not meeting the aquatic life use support goal, and the 2010 Virginia Water Quality Assessment 305(b)/303(d) Integrated Report indicates that much of the mainstem Bay does not fully support this use support goal under Virginia's Water Quality Assessment guidelines. Nutrient enrichment is cited as one of the primary causes of impairment. EPA issued the Bay TMDL on December 29, 2010. It was based, in part, on the Watershed Implementation Plans developed by the Bay watershed states and the District of Columbia.

The Chesapeake Bay TMDL addresses all segments of the Bay and its tidal tributaries that are on the impaired waters list. As with all TMDLs, a maximum aggregate watershed pollutant loading necessary to achieve the Chesapeake Bay's water quality standards has been identified. This aggregate watershed loading is divided among the Bay states and their major tributary basins, as well as by major source categories [wastewater, urban storm water, onsite/septic agriculture, air deposition]. Fact Sheet Section 17.e provides additional information on specific nutrient limitations for this facility to implement the provisions of the Chesapeake Bay TMDL. At the existing design flow of 0.025 MGD, this facility is not affected by the provisions of the Chesapeake Bay TMDL; however, because the permittee has requested an additional tier design flow of 0.040 MGD, nutrient limitations will be included in accordance with the provisions of the Chesapeake Bay TMDL.

b) Receiving Stream Water Quality Criteria

Part IX of 9VAC25-260(360-550) designates classes and special standards applicable to defined Virginia river basins and sections. The receiving stream Motto River, UT is located within Section 3 of the York River Basin, and classified as a Class III water.

At all times, Class III waters must achieve a dissolved oxygen (D.O.) of 4.0 mg/L or greater, a daily average D.O. of 5.0 mg/L or greater, a temperature that does not exceed 32°C, and maintain a pH of 6.0-9.0 standard units (S.U.).

The Freshwater Water Quality Criteria/Wasteload Allocation Analysis dated April 20, 2012 (Attachment 5) details other water quality criteria applicable to the receiving stream.

Ammonia:

Since ambient water quality data for the receiving stream are not available, effluent pH data may be used to establish the ammonia water quality standard. Staff has re-evaluated the effluent data for pH (January 2010 through November 2011) and found a significant difference from the pH data used during the last permit reissuance. The previous permit reissuance used a pH 90th percentile value of 7.8 S.U.; however, the pH data from January 2010 through November 2011 shows that the pH 90th percentile value is 8.3 S.U. The 90th percentile was also calculated for the months of June through November and December through May so that this information could be used to calculate the appropriate Ammonia effluent limit for these seasonal tiers. The pH 90th percentile for these seasonal tiers were 8.35 S.U. (June – November) and 8.3 S.U. (December – May); therefore, a pH value of 8.3 S.U. was used for both seasonal tiers. (See Attachment 6).

There is no temperature effluent data available; therefore, the agency default temperature values of 15°C/25°C was used to calculate the ammonia water quality standards.

Metals Criteria:

The Water Quality Criteria for some metals are dependent on the receiving stream's hardness (expressed as mg/l calcium carbonate). There is no hardness data for this facility. Staff guidance suggests using a default hardness value of 50 mg/L CaCO₃ for streams east of the Blue Ridge. The hardness-dependent metals criteria in Attachment 5 are based on this default value.

Bacteria Criteria:

The Virginia Water Quality Standards (9VAC25-260-170 B.) states sewage discharges shall be disinfected to achieve the following criteria:

E. coli bacteria per 100 ml of water shall not exceed a monthly geometric mean of 126 n/100 mls for a minimum of four weekly samples taken during any calendar month.

c) Receiving Stream Special Standards

The State Water Control Board's Water Quality Standards, River Basin Section Tables (9VAC25-260-360, 370 and 380) designates the river basins, sections, classes, and special standards for surface waters of the Commonwealth of Virginia. The receiving stream, Motto River, UT is located within Section 3 of the York River Basin. There are no special standards designated to this Water Quality Section.

d) Threatened or Endangered Species

The Virginia DGIF Fish and Wildlife Information System Database was searched on December 30, 2011, for records to determine if there are threatened or endangered species in the vicinity of the discharge. No threatened or endangered species were identified. The results of the database search can be found in Attachment 7.

16. Antidegradation (9VAC25-260-30):

All state surface waters are provided one of three levels of antidegradation protection. For Tier 1 or existing use protection, existing uses of the water body and the water quality to protect these uses must be maintained. Tier 2 water bodies have water quality that is better than the water quality standards. Significant lowering of the water quality of Tier 2 waters is not allowed without an evaluation of the economic and social impacts. Tier 3 water bodies

are exceptional waters and are so designated by regulatory amendment. The antidegradation policy prohibits new or expanded discharges into exceptional waters.

The receiving stream has been classified as Tier 1 based on the critical flows for the stream are zero and at times the stream flow is comprised of only effluent. It is staff's best professional judgment that such streams are Tier I. Permit limits proposed have been established by determining wasteload allocations which will result in attaining and/or maintaining all water quality criteria which apply to the receiving stream, including narrative criteria. These wasteload allocations will provide for the protection and maintenance of all existing uses.

17. Effluent Screening, Wasteload Allocation, and Effluent Limitation Development:

To determine water quality-based effluent limitations for a discharge, the suitability of data must first be determined. Data is suitable for analysis if one or more representative data points is equal to or above the quantification level ("QL") and the data represent the exact pollutant being evaluated.

Next, the appropriate Water Quality Standards (WQS) are determined for the pollutants in the effluent. Then, the Wasteload Allocations (WLA) are calculated. In this case since the critical flows 7Q10 and 1Q10 have been determined to be zero, the WLA's are equal to the WQS. The WLA values are then compared with available effluent data to determine the need for effluent limitations. Effluent limitations are needed if the 97th percentile of the daily effluent concentration values is greater than the acute wasteload allocation or if the 97th percentile of the four-day average effluent concentration values is greater than the chronic wasteload allocation. Effluent limitations are based on the most limiting WLA, the required sampling frequency, and statistical characteristics of the effluent data.

a) Effluent Screening:

Effluent data obtained from DMRs from January 2007 through November 2011 shown that the facility's only effluent limitation reported exceeded was Ammonia for June 2011.

The following pollutants require a wasteload allocation analysis: Ammonia as N and Total Residual Chlorine.

b) Mixing Zones and Wasteload Allocations (WLAs):

Wasteload allocations (WLAs) are calculated for those parameters in the effluent with the reasonable potential to cause an exceedance of water quality criteria. The basic calculation for establishing a WLA is the steady state complete mix equation:

$$WLA = \frac{C_o [Q_e + (f)(Q_s)] - [(C_s)(f)(Q_s)]}{Q_e}$$

Where:	WLA	= Wasteload allocation
	C _o	= In-stream water quality criteria
	Q _e	= Design flow
	Q _s	= Critical receiving stream flow (1Q10 for acute aquatic life criteria; 7Q10 for chronic aquatic life criteria; 30Q10 for ammonia criteria; harmonic mean for carcinogen-human health criteria; and 30Q5 for non-carcinogen human health criteria)
	f	= Decimal fraction of critical flow
	C _s	= Mean background concentration of parameter in the receiving stream.

The water segment receiving the discharge via Outfall 001 is considered to have a 7Q10 and 1Q10 of 0.0 MGD. As such, there is no mixing zone and the WLA is equal to the C_o.

c) Effluent Limitations Toxic Pollutants, Outfall 001 –

9VAC25-31-220.D. requires limits be imposed where a discharge has a reasonable potential to cause or contribute to an in-stream excursion of water quality criteria. Those parameters with WLAs that are near effluent concentrations are evaluated for limits.

The VPDES Permit Regulation at 9VAC25-31-230.D. requires that monthly and weekly average limitations be imposed for continuous discharges from POTWs and monthly average and daily maximum limitations be imposed for all other continuous non-POTW discharges.

1) Ammonia as N/TKN:

Staff reevaluated pH and temperature and has concluded it is significantly different than what was used previously to derive ammonia criteria. As result, staff used the new data to determine new ammonia water quality criteria, new wasteload allocations (WLAs) and new ammonia limits (Attachment 8). DEQ guidance suggests using a sole data point of 9.0 mg/L for discharges containing domestic sewage to ensure the evaluation adequately addresses the potential for ammonia to be present in the discharge containing domestic sewage.

For the current design flow of 0.025 MGD, the ammonia effluent limitation for the months of June through November was changed from 1.8 mg/L to 1.6 mg/L for the monthly average concentration and weekly maximum concentration. For the months of December through May, the ammonia monthly average and weekly maximum concentration was unchanged, remaining at 7.5 mg/L.

During the permitting reissuance process, the flow frequency values were recalculated using updated 2006 Stream data values. Using the revised stream flow values, the high flow 30Q10 value was calculated which was not available for the last reissuance. The high flow 30Q10 value is used to calculate the ammonia criteria for the period of December through May (the wet season). The statistical analysis for the ammonia for December through May resulted in no limit being required. The 7.5 mg/L effluent concentration for the December through May time period was established during the 2000 permit reissuance and was carried forward when the permit was reissuance in 2006. Although the 2012 analysis demonstrates that no limit is required, staff has no basis to allow backsliding and since the facility has shown that it can meet the existing ammonia effluent concentration (7.5 mg/L) this limit will remain in effect

For the proposed design flow of 0.040 MGD, the facility will be given a year round TKN limit of 3.0 mg/L. There will be no Ammonia effluent concentration limitation. A TKN limit of 3.0 mg/L assumes that the remaining nitrogen is in the form of refractory organic compounds that will not be easily oxidized and that ammonia is removed when the 3.0 mg/L TKN limit is met. The weekly average limit will be 4.5 mg/L based on a multiplier of 1.5 times the monthly average.

2) Total Residual Chlorine:

Chlorine is used for disinfection and is potentially in the discharge. Staff calculated WLAs for TRC using current critical flows and the mixing allowance. In accordance with current DEQ guidance, staff used a default data point of 0.2 mg/L and the calculated WLAs to derive limits. A monthly average of 0.008 mg/L and a weekly average limit of 0.010 mg/L are proposed for this discharge (see Attachment 8).

3) Metals/Organics:

No metals or organics data were available for review; therefore, no effluent limits are proposed.

d) Effluent Limitations and Monitoring, Outfall 001 – Conventional and Non-Conventional Pollutants

No changes to dissolved oxygen (D.O.), biochemical oxygen demand-5 day (BOD₅), total suspended solids (TSS), and pH limitations are proposed for the 0.025 MGD design flow.

A stream model for establishing the current Dissolved Oxygen, BOD₅, and TSS limitations could not be found; therefore, the basis for these effluent limitations are assumed to be the Federal effluent guidelines for secondary treatment. At least 85% removal for BOD₅ and TSS must be attained for this effluent.

The VPDES Permit Application for this permit reissuance requested a design flow tier of 0.040 MGD be incorporated into this permit reissuance. Due to the following characteristics of the receiving stream (1) 7Q10 flow of 0.00 cfs, (2) the immediate upstream designation as being a swampy environment on the Ladysmith USGS topographic map, (3) downstream slope of the receiving stream being very flat (0.2 %), and (4) the small drainage area at the discharge point (1.63 mi²), staff has determined that the discharge cannot be easily modeled and mixing is very limited. In accordance with VPDES Permit Manual, Section MN-2, E, the following effluent limitations have been found to be representative of “self-sustaining” effluent: cBOD₅ and TSS of 10 mg/L and TKN of 3.0 mg/L. It is staff’s best professional judgment that the effluent Dissolved Oxygen remain at 6.0 mg/L.

It is staff’s practice to equate the Total Suspended Solids limits with the BOD₅ or cBOD₅ limits. TSS limits are established to equal BOD₅ or cBOD₅ limits since the two pollutants are closely related in terms of treatment of domestic sewage.

pH limitations are set at the water quality criteria.

E. coli/ limitations are in accordance with the Water Quality Standards 9VAC25-260-170.

e) For 0.040 MGD Design flow Effluent Annual Average Limitations and Monitoring. Outfall 001 – Nutrients

VPDES Regulation 9VAC25-31-220(D) requires effluent limitations that are protective of both the numerical and narrative water quality standards for state waters, including the Chesapeake Bay.

As discussed in Section 15, significant portions of the Chesapeake Bay and its tributaries are listed as impaired with nutrient enrichment cited as one of the primary causes. Virginia has committed to protecting and restoring the Bay and its tributaries. There are three regulations that necessitate the inclusion of nutrient limitations now that the facility is expanding.

- 9VAC25-40 - *Regulation for Nutrient Enriched Waters and Dischargers within the Chesapeake Bay Watershed* requires new or expanding discharges with design flows of ≥ 0.04 MGD to treat for TN and TP to either BNR levels (TN = 8 mg/L; TP = 1.0 mg/L) or SOA levels (TN = 3.0 mg/L and TP = 0.3 mg/L).

- 9VAC25-720 – *Water Quality Management Plan Regulation* sets forth TN and TP maximum wasteload allocations for facilities designated as significant discharges, i.e., those with design flows of ≥ 0.5 MGD above the fall line and ≥ 0.1 MGD below the fall line. This regulation limits the total nitrogen and total phosphorus mass loadings from these discharges.

- 9VAC25-820 *General Virginia Pollutant Discharge Elimination System (VPDES) Watershed Permit Regulation for Total Nitrogen and Total Phosphorus Discharges and Nutrient Trading in the Chesapeake Bay Watershed in Virginia* became effective January 1, 2007. This regulation specifies and controls the nitrogen and phosphorus loadings from facilities and specifies facilities that must register under the general permit. Nutrient loadings for those facilities registered under the general permit as well as compliance schedules and other permit requirements, shall be authorized, monitored, limited, and otherwise regulated under the general permit and not this individual permit. This facility will have coverage under this General Permit; the permit number is VAN030156.

Monitoring for Nitrates + Nitrites, Total Nitrogen, and Total Phosphorus are included in this permit. The monitoring is needed to ensure protection of the Water Quality Standards of the Chesapeake Bay. Monitoring frequencies are set at the frequencies set forth in 9VAC25-820. Annual average effluent limitations, as well as monthly and year to date calculations, for Total Nitrogen and Total Phosphorus are included for the design flow 0.040 MGD tier in this permit. The annual averages are based on the offset plan submitted as part of the Registration Statement for 9VAC25-820.

f) Effluent Limitations and Monitoring Summary.

The effluent limitations are presented in the following tables for both the existing design flow of 0.025 MGD

and 0.040 MGD. Limits were established for Flow, BOD₅, Total Suspended Solids, Ammonia as N, pH, Dissolved Oxygen, Total Residual Chlorine, and *E.coli* for the 0.025 MGD design flow. Limits were established for Flow, cBOD₅, Total Suspended Solids, pH, Dissolved Oxygen, Total Residual Chlorine, Total Kjeldahl Nitrogen (TKN), Total Nitrogen, and Total Phosphorus, and *E.coli* for the 0.040 MGD design flow.

The limit for Total Suspended Solids is based on Best Professional Judgement.

The mass loading (kg/d) for monthly and weekly averages were calculated by multiplying the concentration values (mg/L), with the flow values (in MGD) and a conversion factor of 3.785.

Sample Type and Frequency are in accordance with the recommendations in the VPDES Permit Manual and 9VAC25-40 - *Regulation for Nutrient Enriched Waters and Dischargers within the Chesapeake Bay Watershed*.

18. Antibacksliding:

All limits in this permit are at least as stringent as those previously established. Backsliding does not apply to this reissuance.

19. Effluent Limitations/Monitoring Requirements:

Design flow is 0.025 MGD.

Effective Dates: During the period beginning with the permit's effective date and lasting until the expiration date or the issuance of the CTO for the 0.040 MGD facility, the permittee is authorized to discharge from Outfall Number 001.

Such discharges shall be limited and monitored by the permittee as specified below.

PARAMETER	BASIS FOR LIMITS	DISCHARGE LIMITATIONS						MONITORING REQUIREMENTS	
		Monthly Average		Weekly Average		Minimum	Maximum	Frequency	Sample Type
Flow (MGD)	NA	NL		NA		NA	NL	1/D	Estimate
pH	3	NA		NA		6.0 S.U.	9.0 S.U.	1/D	Grab
BOD ₅	1	30 mg/L	2.8 kg/day	45 mg/L	4.3 kg/day	NA	NA	1/M	Grab
Total Suspended Solids (TSS)	1	30 mg/L	2.8 kg/day	45 mg/L	4.3 kg/day	NA	NA	1/M	Grab
DO	3	NA		NA		6.0 mg/L	NA	1/D	Grab
Ammonia, as N (December - May)	3	7.5 mg/L		7.5 mg/L		NA	NA	1/M	Grab
Ammonia, as N (June – November)	3	1.6 mg/L		1.6 mg/L		NA	NA	1/M	Grab
<i>E. coli</i> (Geometric Mean) ^a	3	126 n/100mls		NA		NA	NA	1/W	Grab
Total Residual Chlorine (after contact tank)	2, 3, 4	NA		NA		1.0 mg/L	NA	1/D	Grab
Total Residual Chlorine (after dechlorination)	3	0.008 mg/L		0.010 mg/L		NA	NA	1/D	Grab

The basis for the limitations codes are:

1. Federal Effluent Requirements
2. Best Professional Judgment
3. Water Quality Standards
4. DEQ Disinfection Guidance

MGD = Million gallons per day.

NA = Not applicable.

NL = No limit; monitor and report.

S.U. = Standard units.

1/D = Once per day.

1/W = Once per week.

1/M = Once per month.

Estimate = Reported flow is to be based on the technical evaluation of the sources contributing to the discharge.

Grab = An individual sample collected over a period of time not to exceed 15-minutes.

- a. Samples shall be collected between 10:00 a.m. and 4:00 p.m.

19. Effluent Limitations/Monitoring Requirements:

Design flow is 0.040 MGD.

Effective Dates: During the period beginning with the issuance of the CTO for the 0.040 MGD facility and lasting until the permit's expiration date, the permittee is authorized to discharge from Outfall Number 001. Such discharges shall be limited and monitored by the permittee as specified below.

PARAMETER	BASIS FOR LIMITS	DISCHARGE LIMITATIONS						MONITORING REQUIREMENTS	
		Monthly Average		Weekly Average		Minimum	Maximum	Frequency	Sample Type
Flow (MGD)	NA	NL		NA		NA	NL	1/D	Estimate
pH	3	NA		NA		6.0 S.U.	9.0 S.U.	1/D	Grab
cBOD ₅	2	10 mg/L	1.5 kg/day	15 mg/L	2.3 kg/day	NA	NA	1/M	Grab
Total Suspended Solids (TSS)	2	10 mg/L	1.5 kg/day	15 mg/L	2.3 kg/day	NA	NA	1/M	Grab
DO	3	NA		NA		6.0 mg/L	NA	1/D	Grab
Total Kjeldahl Nitrogen (TKN)	2	3.0 mg/L	0.45 kg/day	4.5 mg/L	0.68 kg/day	NA	NA	1/M	Grab
<i>E. coli</i> (Geometric Mean)	3	126 n/100mls		NA		NA	NA	1/W	Grab
Total Residual Chlorine (after contact tank)	2, 3, 4	NA		NA		1.0 mg/L	NA	1/D	Grab
Total Residual Chlorine (after dechlorination)	3	0.008 mg/L		0.010 mg/L		NA	NA	1/D	Grab
Nitrate+Nitrite, as N	3, 5	NL mg/L		NA		NA	NA	1/2W	8H-C
Total Nitrogen ^a	3, 5	NL mg/L		NA		NA	NA	1/2W	Calculated
Total Nitrogen – Year to Date ^b	3, 5	NL mg/L		NA		NA	NA	1/M	Calculated
Total Nitrogen - Calendar Year ^b	3, 5	11.7 mg/L		NA		NA	NA	1/YR	Calculated
Total Phosphorus	3,5	NL mg/L		NA		NA	NA	1/2W	8H-C
Total Phosphorus – Year to Date ^b	3, 5	NL mg/L		NA		NA	NA	1/M	Calculated
Total Phosphorus - Calendar Year ^b	3, 5	1.6 mg/L		NA		NA	NA	1/YR	Calculated

The basis for the limitations codes are:

1. Federal Effluent Requirements
2. Best Professional Judgment
3. Water Quality Standards
4. DEQ Disinfection Guidance
5. 9VAC25-40 (Nutrient Regulation)

MGD = Million gallons per day.

NA = Not applicable.

NL = No limit; monitor and report.

S.U. = Standard units.

1/D = Once per day.

1/W = Once per week.

1/M = Once per month.

1/2W = Once every two weeks, at least 7 days apart.

8H-C = A flow proportional composite sample collected manually or automatically, and discretely or continuously, for the entire discharge of the monitored 8-hour period. Where discrete sampling is employed, the permittee shall collect a minimum of eight (8) aliquots for compositing. Discrete sampling may be flow proportioned either by varying the time interval between each aliquot or the volume of each aliquot. Time composite samples consisting of a minimum of eight (8) grab samples obtained at hourly or smaller intervals may be collected where the permittee demonstrates that the discharge flow rate (gallons per minute) does not vary by $\geq 10\%$ or more during the monitored discharge.

Estimate = Reported flow is to be based on the technical evaluation of the sources contributing to the discharge.

Grab = An individual sample collected over a period of time not to exceed 15-minutes.

a. Total Nitrogen = Sum of TKN plus Nitrate+Nitrite

b. See Section 20.a. for the calculation of the Nutrient Calculations.

20. Other Permit Requirements:

- a) Part I.B. of the permit contains additional chlorine monitoring requirements, quantification levels and compliance reporting instructions.

These additional chlorine requirements are necessary per the Sewage Collection and Treatment Regulations at 9VAC25-70 and by the Water Quality Standards at 9VAC25-260-170. A minimum chlorine residual must be maintained at the exit of the chlorine contact tank to assure adequate disinfection. No more than 10% of the monthly test results for TRC at the exit of the chlorine contact tank shall be < 1.0 mg/L with any TRC < 0.6

mg/L considered a system failure. Monitoring at numerous STPs has concluded that a TRC residual of 1.0 mg/L is an adequate indicator of compliance with the *E. coli* criteria. *E. coli* limits are defined in this section as well as monitoring requirements to take effect should an alternate means of disinfection be used.

9VAC25-31-190.L.4.c. requires an arithmetic mean for measurement averaging and 9VAC25-31-220.D. requires limits be imposed where a discharge has a reasonable potential to cause or contribute to an in-stream excursion of water quality criteria. Specific analytical methodologies for toxics are listed in this permit section as well as quantification levels (QLs) necessary to demonstrate compliance with applicable permit limitations or for use in future evaluations to determine if the pollutant has reasonable potential to cause or contribute to a violation. Required averaging methodologies are also specified.

The calculations for the Nitrogen and Phosphorus parameters shall be in accordance with the calculations set forth in 9VAC25-820 *General Virginia Pollutant Discharge Elimination System (VPDES) Watershed Permit Regulation for Total Nitrogen and Total Phosphorus Discharges and Nutrient Trading in the Chesapeake Bay Watershed in Virginia*. §62.1-44.19:13 of the Code of Virginia defines how annual nutrient loads are to be calculated; this is carried forward in 9VAC25-820-70. As annual concentrations (as opposed to loads) are limited in the individual permit, these reporting calculations are intended to reconcile the reporting calculations between the permit programs, as the permittee is collecting a single set of samples for the purpose of ascertaining compliance with two permits.

21. Other Special Conditions:

- a) 95% Capacity Reopener. The VPDES Permit Regulation at 9VAC25-31-200.B.4. requires all POTWs and PVOTWs develop and submit a plan of action to DEQ when the monthly average influent flow to their sewage treatment plant reaches 95% or more of the design capacity authorized in the permit for each month of any three consecutive month period. The facility is a PVOTW.
- b) O&M Manual Requirement. Required by Code of Virginia §62.1-44.19; Sewage Collection and Treatment Regulations, 9VAC25-790; VPDES Permit Regulation, 9VAC25-31-190.E. The permittee shall maintain an up-to-date O & M Manual for the treatment works. Any changes in the practices and procedures followed by the permittee shall be documented in the O & M Manual within 90 days of the effective date of the changes. The permittee shall operate the treatment works in accordance with the O & M Manual and shall make the O & M Manual available to Department personnel for review during facility inspections. Within 30 days of a request by DEQ, the current O & M Manual shall be submitted to DEQ Northern Regional Office for review. Non-compliance with the O&M Manual shall be deemed a violation of the permit.
- c) CTC, CTO Requirement. The Code of Virginia § 62.1-44.19; Sewage Collection and Treatment Regulations, 9VAC25-790 requires that all treatment works treating wastewater obtain a Certificate to Construct prior to commencing construction and to obtain a Certificate to Operate prior to commencing operation of the treatment works.
- d) Financial Assurance. Until such time that the CTO has been issued for the 0.040 MGD expansion, this permittee is required by Code of Virginia §62.1.-44.18:3 and the Board's Financial Assurance Regulation, 9VAC25-650-1, et seq. to submit a closure plan and maintain adequate financial assurance in the event the facility ceases operations. This regulation is applicable to owners and operators of PVOTWs with a design flow >0.005 MGD but <0.040 MGD and treating sewage from private residences. The permitted facility is a PVOTW with a design flow of 0.025 MGD, and treats sewage generated from private residences.
- e) Licensed Operator Requirement. The Code of Virginia at §54.1-2300 et seq. and the VPDES Permit Regulation at 9VAC25-31-200 C, and Rules and Regulations for Waterworks and Wastewater Works Operators (18VAC160-20-10 et seq.) requires licensure of operators. This facility requires a Class IV operator.
- f) Reliability Class. The Sewage Collection and Treatment Regulations at 9VAC25-790 require sewage treatment works to achieve a certain level of reliability in order to protect water quality and public health consequences in the event of component or system failure. Reliability means a measure of the ability of the treatment works to perform its designated function without failure or interruption of service. The facility is required to meet a reliability Class of III.

- g) Sludge Reopener. The VPDES Permit Regulation at 9VAC25-31-220.C. requires all permits issued to treatment works treating domestic sewage (including sludge-only facilities) include a reopener clause allowing incorporation of any applicable standard for sewage sludge use or disposal promulgated under Section 405(d) of the CWA. The facility includes a sewage treatment works.
- h) Sludge Use and Disposal. The VPDES Permit Regulation at 9VAC25-31-100.P; 220.B.2., and 420 through 720, and 40 CFR Part 503 require all treatment works treating domestic sewage to submit information on their sludge use and disposal practices and to meet specified standards for sludge use and disposal. The facility includes a treatment works treating domestic sewage.
- i) Treatment Works Closure Plan. The State Water Control Law §62.1-44.15:1.1, makes it illegal for an owner to cease operation and fail to implement a closure plan when failure to implement the plan would result in harm to human health or the environment. This condition is used to notify the owner of the need for a closure plan where a facility is being replaced or is expected to close.
- j) Nutrient Offsets. The Virginia General Assembly, in their 2005 session, enacted a new Article 4.02 (Chesapeake Bay Watershed Nutrient Credit Exchange Program) to the Code of Virginia to address nutrient loads to the Bay. Section 62.1-44.19:15 sets forth the requirements for new and expanded dischargers, which are captured by the requirements of the law, including the requirement that non-point load reductions acquired for the purpose of offsetting nutrient discharges be enforced through the individual VPDES permit.
- k) E3/E4. 9VAC25-40-70 B authorizes DEQ to approve an alternate compliance method to the technology-based effluent concentration limitations as required by subsection A of this section. Such alternate compliance method shall be incorporated into the permit of an Exemplary Environmental Enterprise (E3) facility or an Extraordinary Environmental Enterprise (E4) facility to allow the suspension of applicable technology-based effluent concentration limitations during the period the E3 or E4 facility has a fully implemented environmental management system that includes operation of installed nutrient removal technologies at the treatment efficiency levels for which they were designed.
- l) Nutrient Reopener. 9VAC25-40-70 A authorizes DEQ to include technology-based annual concentration limits in the permits of facilities that have installed nutrient control equipment, whether by new construction, expansion or upgrade. 9VAC25-31-390 A authorizes DEQ to modify VPDES permits to promulgate amended water quality standards.

Permit Section Part II. Part II of the permit contains standard conditions that appear in all VPDES Permits. In general, these standard conditions address the responsibilities of the permittee, reporting requirements, testing procedures and records retention.

22. Changes to the Permit from the Previously Issued Permit:

- a) Special Conditions:
 - (1) Special Condition "Indirect Dischargers" was deleted since this facility serves only a mobile home park.
 - (2) Special Conditions "Nutrient Offsets", "E3/E4", and "Nutrient Reopener" were added to the permit due to the permittee's request for the 0.040 MGD design flow tier. By adding this design flow tier, these nutrient special conditions were added in accordance with DEQ guidance.
- b) Monitoring and Effluent Limitations:
 - (1) Seasonal Ammonia effluent limitations (June through November) for the 0.025 MGD flow tier were changed based on the revised flow frequency (2006 stream data). The lower ammonia effluent limits reflect computed limits based on effluent characteristics.
 - (2) The 0.040 MGD design flow tier was added with the appropriate parameter effluent limitations and monitoring requirements.

23. Variances/Alternate Limits or Conditions:

There are no variances and/or alternate limits and/or conditions in this permit.

24. Public Notice Information:

First Public Notice Date: May 22, 2012

Second Public Notice Date: May 29, 2012

Public Notice Information is required by 9VAC25-31-280 B. All pertinent information is on file and may be inspected, and copied by contacting the: DEQ Northern Regional Office, 13901 Crown Court, Woodbridge, VA 22193, Telephone No. (703) 583-3925, joan.crowther@deq.virginia.gov. See Attachment 9 for a copy of the public notice document.

Persons may comment in writing or by email to the DEQ on the proposed permit action, and may request a public hearing, during the comment period. Comments shall include the name, address, and telephone number of the writer and of all persons represented by the commenter/requester, and shall contain a complete, concise statement of the factual basis for comments. Only those comments received within this period will be considered. The DEQ may decide to hold a public hearing, including another comment period, if public response is significant and there are substantial, disputed issues relevant to the permit. Requests for public hearings shall state 1) the reason why a hearing is requested; 2) a brief, informal statement regarding the nature and extent of the interest of the requester or of those represented by the requester, including how and to what extent such interest would be directly and adversely affected by the permit; and 3) specific references, where possible, to terms and conditions of the permit with suggested revisions. Following the comment period, the Board will make a determination regarding the proposed permit action. This determination will become effective, unless the DEQ grants a public hearing. Due notice of any public hearing will be given. The public may request an electronic copy of the draft permit and fact sheet or review the draft permit and application at the DEQ Northern Regional Office by appointment.

25. 303 (d) Listed Stream Segments and Total Max. Daily Loads (TMDL):

Although this facility does not discharge directly to a stream that is listed in the 2010 Virginia Water Quality Assessment 305(b)/303(d) Integrated Report, the receiving stream (Motto River, UT) does flow into the South River that is listed as impaired for *E.coli* in Part I of the 2010 Virginia Water Quality Assessment 305(b)/303(d) Integrated Report. A TMDL has not been prepared or approved for the segment. This permit has limits of 126 n/100mls for *E.coli* that requires compliance with the standard prior to discharge. Given these limits this facility can neither cause nor contribute to the observed violation of the standards. The permit contains a re-opener condition that may allow these limits to be modified, in compliance with section 303(d)(4) of the Act once a TMDL is approved.

Special Permit considerations:

Include the TMDL re-opener special condition.

TMDL Reopener: This special condition is to allow the permit to reopened if necessary to bring it in compliance with any applicable TMDL that may be developed and approved for the receiving stream.

26. Additional Comments:

Previous Board Action(s): None

Staff Comments: None.

Public Comment: No comments were received during the public notice comment period.

EPA Checklist: The checklist can be found in Attachment 10.

27. Total Nitrogen and Total Phosphorus Annual Averages:

Total Nitrogen and Total Phosphorus annual averages at the 0.040 MGD flow tier were calculated using a permitted design capacity based on the existing 0.025 MGD flow. Permitted design capacity means the allowable load (pounds per year) assigned to an existing facility that is a non-significant discharger (less than 0.1 MGD below the fall line) that does not have a wasteload allocation listed in the Water Quality Management Plan regulation (9VAC25-720).

Facilities that have installed secondary wastewater treatment intended to achieve a BOD₅ and TSS monthly average of 30 mg/L are assumed to achieve an annual average total nitrogen effluent concentration of 18.7 mg/L and an annual average total phosphorus effluent concentration of 2.5 mg/L. To obtain the permitted design capacity (PDC) for the Woodford Wastewater Treatment Plant the following calculation is used:

Total Nitrogen PDC = Existing Flow x TN Concentration (mg/L) x 365 days per year x 8.3438 (conversion factor)

Total Phosphorus PDC = Existing Flow x TP Concentration (mg/L) x 365 days per year x 8.3438 (conversion factor)

$$\begin{aligned}\text{Total Nitrogen PDC} &= 0.025 \text{ MGD} \times 18.7 \text{ mg/L} \times 365 \times 8.3438 \\ &= 1424 \text{ lbs/year}\end{aligned}$$

$$\begin{aligned}\text{Total Phosphorus PDC} &= 0.025 \text{ MGD} \times 2.5 \text{ mg/L} \times 365 \times 8.3438 \\ &= 190 \text{ lbs/year}\end{aligned}$$

The Total Nitrogen and Total Phosphorus annual averages for the 0.040 MGD flow tier are then calculated using the following calculation:

$$\text{Annual Average} = \text{Permitted Design Capacity} \div 365 \text{ days per year} \div 8.3438 \text{ (conversion factor)} \div 0.040 \text{ MGD}$$

$$\begin{aligned}\text{Total Nitrogen Annual Average} &= 1424 \text{ pounds per year} \div 365 \text{ days per year} \div 8.3438 \div 0.040 \text{ MGD} \\ &= 11.7 \text{ mg/L}\end{aligned}$$

$$\begin{aligned}\text{Total Phosphorus Annual Average} &= 190 \text{ pounds per year} \div 365 \text{ days per year} \div 8.3438 \div 0.040 \text{ MGD} \\ &= 1.6 \text{ mg/L}\end{aligned}$$

VA0061409 Woodford Estates MHC, LLC Sewage Treatment Plant
Fact Sheet Attachments

Attachment	Description
1	Flow Frequency Determination Memo dated May 19, 2000, Updated May 11, 2012
2	Facility Schematic/Diagram
3	Facility Site Inspection dated February 19, 2008
4	Planning Statement for Woodford Estates dated October 25, 2011
5	Freshwater Water Quality Criteria/Wasteload Allocated Analysis dated May 11, 2012
6	Effluent pH Data (January 2010 – November 2011)
7	DGIF Threatened and Endangered Species Database Search dated December 30, 2011
8	Ammonia Effluent and Total Residual Chlorine Calculation Results
9	Public Notice
10	EPA Checklist dated April 6, 2012

Memorandum

Subject: Woodford – Linear Regression Flow Calculations for Motto River, UT

To: File

From: Joan C. Crowther

Date: May 11, 2012

The original flow frequency determination for this discharge was calculated by Paul Herman and represented in his memo dated May 19, 2000. The purpose of this memo is to document that the flow frequency for this discharge has been updated and revised. Therefore, this memo supersedes Paul Herman's memo dated May 19, 2000. In order to calculate the appropriate wet season ammonia criteria, the high flow 30Q10 flow was needed to be determined. This flow had not been calculated in the May 19, 2000.

According to the May 19, 2000 memo, the USGS conducted several flow measurements on the Mat River approximately 4.0 miles west of the discharge point at the Route 647 Bridge near Marye, VA (#01673960). The measurements made by the USGS correlated very well with the same day mean values from the continuous record gage on the Po River near Spotsylvania, VA (#01673800). The measurements and daily mean values were plotted on a logarithmic graph and a best fit line was drawn through the data points. The required flow frequencies from the reference gage were plugged into the equation for the regression line and the associated flow frequencies at the measurement site were calculated.

Then the Matt River discharge area ratio was used to determine the flow frequencies for the Motto River, UT at the discharge point. The same method was used to revise and update the flow frequencies. The more recent 1.34 mi² drainage area for the Motto River, UT was used. The flow frequency statistics are in the graph below. The regression analysis yields an R Square value of 0.91603284 based on 10 observations. These calculations were performed by Phil Hurst, DEQ-NRO.

Flow Frequency Statistics				
	Po River (2006 Updated) (#0167389) cfs	Mat River (#01673960) cfs	Motto River, UT (discharge point) cfs	Motto River, UT (discharge point) MGD
Harmonic Mean	NA	NA	NA	NA
HF30Q10	12	0.719	0.06645	0.042947
HF7Q10	6.0	0.196	0.0181	0.011698
HF1Q10	4.3	0.105	0.00969	0.006262
30Q5	0.63	0.003	0.00026	0.000168
30Q10	0.26	0.001	0.00005	0.000032
7Q10	0.17	0.0002	0.00002	0.000012
1Q10	0.12	0.0001	0.00001	0.000006
1Q30	0.05	0.00002	0.000002	0.000001

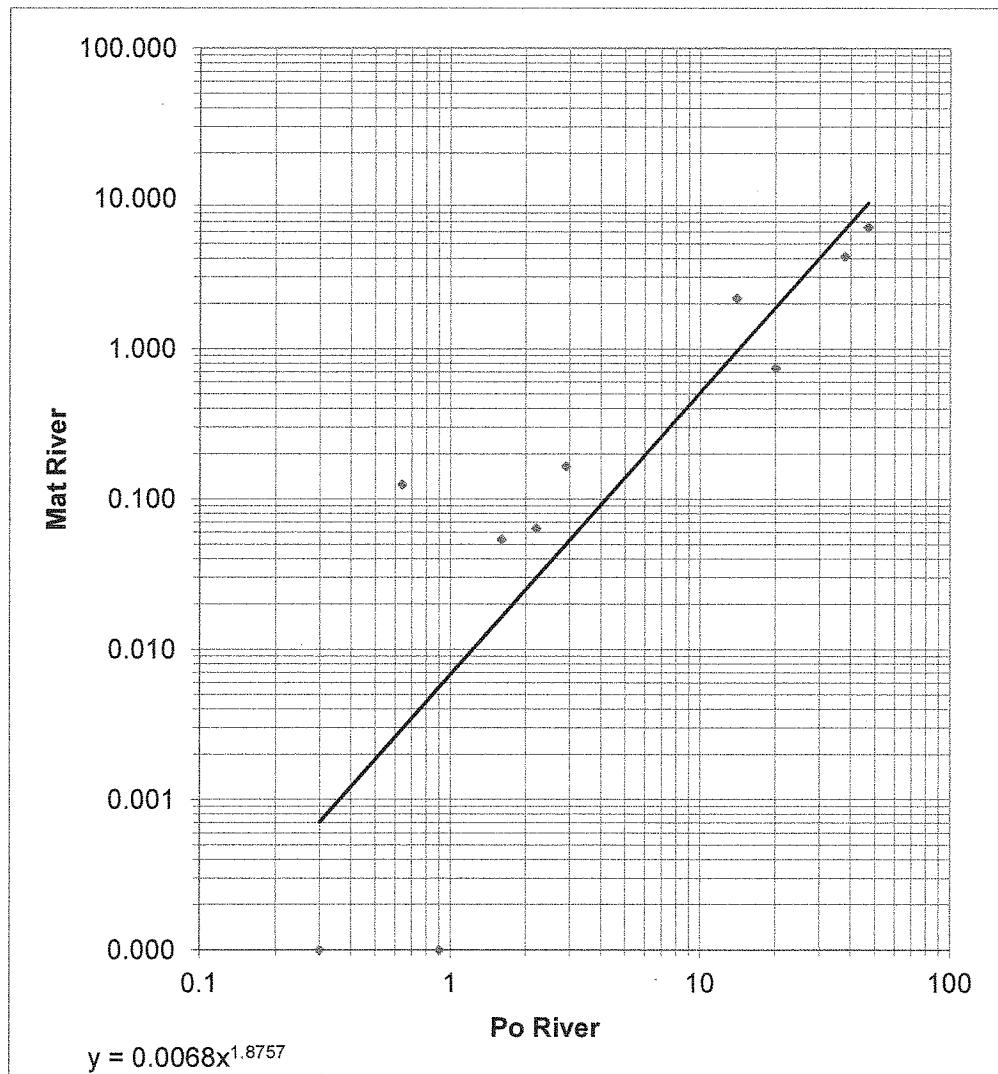
Flow Data (cfs)		
Date	Po	Mat
8/20/1963	0.3	0.000
6/26/1981	2.9	0.165
9/15/1981	0.9	0.000
10/23/1981	0.64	0.125
8/5/1982	20	0.746
10/28/1982	38	4.12
8/2/1983	2.2	0.064
10/20/1983	1.6	0.054
9/6/1984	14	2.18
12/13/1984	47	6.49

Flow Frequencies (cfs)			
Po		Mat	Motto
0.12	1Q10	0.0001	0.00001
0.17	7Q10	0.0002	0.00002
0.63	30Q5	0.003	0.00026
4.3	HF 1Q10	0.105	0.00969
6	HF 7Q10	0.196	0.01811
0	HM	0.000	0.00000
77.4	DA (mi ²)	14.5	1.34
	Jan-May		
0.26	30Q10	0.001	0.00005
12	HF 30Q10	0.719	0.06645
0.05	1Q30	0.00002	0.000002

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.957342
R Square	0.916503
Adjusted R Square	0.906066
Standard Error	5.24866
Observations	10

Mat River near Marye, VA #01673960
vs Po River near Spotsylvania, VA #01673800



MEMORANDUM

DEPARTMENT OF ENVIRONMENTAL QUALITY - WATER DIVI
Water Quality Assessments and Planning
629 E. Main Street P.O. Box 10009 Richmond, Virginia 23240

SUBJECT: Flow Frequency Determination
Minarchi Mobile Home Park STP - #VA0061409

TO: Jeff Talbott, NRO

FROM: Paul E. Herman, P.E., WQAP *Paul*

DATE: May 19, 2000

COPIES: Ron Gregory, Charles Martin, File

RECEIVED
MAY 23 2000

Northern VA. Region
Dept. of Env. Quality

This memo supersedes my July 31, 1995, memo to Doug Stockman concerning the subject VPDES permit.

The Minarchi Mobile Home Park STP discharges to an unnamed tributary to the Motto River near Arcadia, VA. Stream flow frequencies are required at this site by the permit writer for the purpose of calculating effluent limitations for the VPDES permit.

The USGS conducted several flow measurements on the Mat River the were made approximately 4.0 miles west of the discharge point at the Route 647 bridge near Marye, VA. The measurements made by the USGS correlated very well with the same day daily mean values from the continuous record gage on the Po River near Spotsylvania, VA #01673800. The measurements and daily mean values were plotted on a logarithmic graph and a best fit line was drawn through the data points. The required flow frequencies from the reference gage were plugged into the equation for the regression line and the associated flow frequencies at the measurement site were calculated.

The flow frequencies at the discharge point were determined by using the values at the measurement site and adjusting them by proportional drainage areas. The data for the reference gage, the measurement site and the discharge point are presented below:

Po River near Spotsylvania, VA (#01673800):

Drainage Area = 77.4 mi²

1Q10 = 0.13 cfs	High Flow 1Q10 = 6.2 cfs
7Q10 = 0.18 cfs	High Flow 7Q10 = 9.1 cfs
30Q5 = 0.77 cfs	HM = 4.4 cfs

Mat River near Marye, VA (#01673960):

Drainage Area = 14.5 mi²

1Q10 = 0.0 cfs	High Flow 1Q10 = 0.25 cfs
7Q10 = 0.0 cfs	High Flow 7Q10 = 0.46 cfs
30Q5 = 0.01 cfs	HM = 0.0 cfs

Unnamed Tributary to Motto River at discharge point:

Drainage Area = 1.63 mi²

1Q10 = 0.0 cfs

High Flow 1Q10 = 0.03 cfs

7Q10 = 0.0 cfs

High Flow 7Q10 = 0.05 cfs

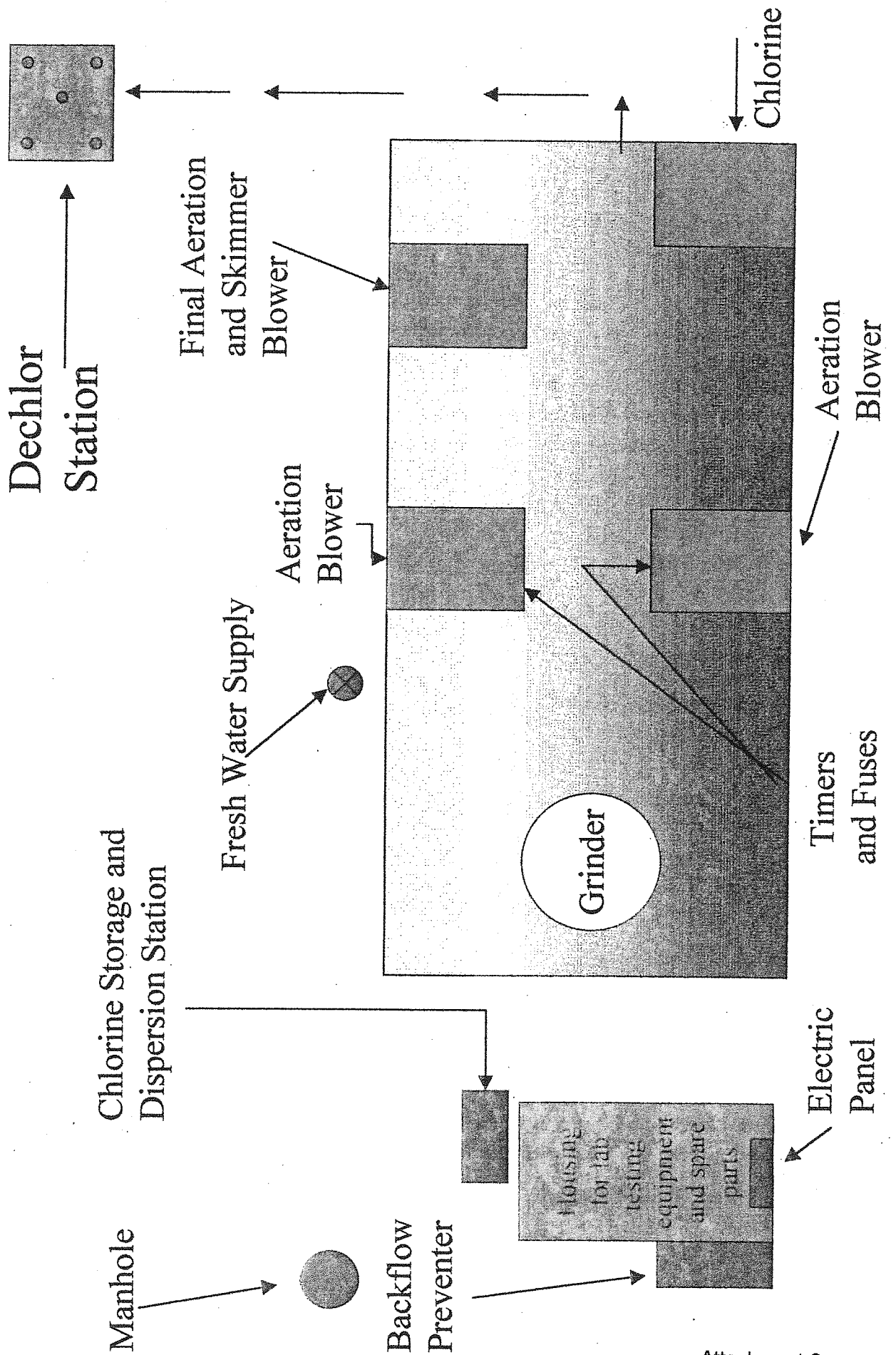
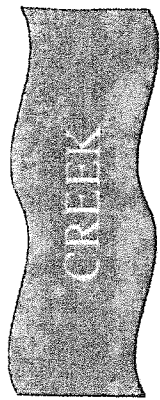
30Q5 = 0.0 cfs

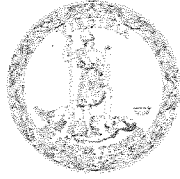
HM = 0.0 cfs

The high flow months are December through May. This analysis assumes there are no significant discharges, withdrawals or springs influencing the flow in the unnamed tributary upstream of the discharge point.

If there are any questions concerning this analysis, please let me know.

GUIDE TO EQUIPMENT LOCATION





COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

NORTHERN REGIONAL OFFICE

13901 Crown Court, Woodbridge, Virginia 22193
(703) 583-3800 Fax (703) 583-3801
www.deq.virginia.gov

Preston Bryant
Secretary of Natural Resources

David K. Paylor
Director

Thomas A. Faha
Regional Director

March 12, 2008

Mr. Matthew Raynor
Environmental Director
The Carlyle Group, Inc.
10006 Hammock Bend
Chapel Hill, NC 27517

Re: Woodford Estates MHC, LLC STP – VA 0061409

Dear Mr. Raynor:

Enclosed are copies of the facility technical and laboratory inspection reports generated from observations made while performing a Facility Technical Inspection at the Woodford Estates MHC - Sewage Treatment Plant (STP) on February 19, 2008. The compliance staff would like to thank Mr. Buckey Dabney for his time and assistance during the inspection.

An updated summary for the laboratory inspection is enclosed. The facility had **NO Deficiencies** for the laboratory inspection. Please note the requirements and recommendations addressed in the laboratory summary.

If you have any questions or comments concerning this report, please feel free to contact me at the Northern Virginia Regional Office at (703) 583-3896 or by email at ebiller@deq.virginia.gov.

Sincerely,

A handwritten signature in cursive script that reads "Beth Biller".

Beth Biller
Environmental Specialist II

cc: Permits/DMR file
Compliance Manager
Compliance Auditor
Steve Stell – OWCP
Dabney & Crooks

WASTEWATER FACILITY INSPECTION REPORT

PREFACE

VPDES/State Certification No.	(RE) Issuance Date	Amendment Date	Expiration Date
VA0061409	December 29, 2006	5/16/07 & 2/20/08	December 28, 2011
Facility Name	Address		Telephone Number
Woodford Estates MHC, L.L.C. STP	12392 Cousteau Street Woodford, VA 22580		
Owner Name	Address		Telephone Number
The Carlyle Group	10006 Hammock Bend Chapel Hill, NC 27157		
Responsible Official	Title		Telephone Number
Matthew Raynor	Environmental Director		(919) 960-5739
Responsible Operator	Operator Cert. Class/number		Telephone Number
Doug Crooks	Class I / 1909 000367		(540) 373-0380

TYPE OF FACILITY:

DOMESTIC				INDUSTRIAL			
Federal		Major		Major		Primary	
Non-federal	X	Minor	X	Minor		Secondary	

INFLUENT CHARACTERISTICS:

DESIGN:

	Flow	0.025 MGD	
	Population Served	Unknown	
	Connections Served	72 trailers	
	BOD ₅	157 mg/L (12/07)	
	TSS	127 mg/L (12/07)	

EFFLUENT LIMITS: (mg/L unless specified)

Parameter	Min.	Avg.	Max.	Parameter	Min.	Avg.	Max.
Flow (MGD)		0.025		DO	6.0		
pH (s.u.)	6.0		9.0	CL2 CCT	1.0		
TSS		30	45	CL2 Inst Res	0.6		
BOD5		30	45	CL2 effluent		0.008	0.010
Ammonia (Dec-May)		7.5	7.5	Ammonia (June-Nov)		1.8	1.8

	Receiving Stream	Motto River, UT	
	Basin	York River	
	Discharge Point (LAT)	77° 31' 11" W	
	Discharge Point (LONG)	38° 05' 24" N	

Technical Inspection Summary

Comments/Recommendations for action from current inspection on February 19, 2008:

- Staff should be commended on a well maintained and clean facility.
- The backflow prevention device must be certified annually. The previous owner was replacing the unit annually; the operator was made aware of the unit at the time of inspection. **Please provide DEQ with an update as to the status of this unit by April 1, 2008.**

**DEQ
WASTEWATER FACILITY
INSPECTION REPORT
PART 1**

Inspection date: **February 19, 2008** Date form completed: **March 4, 2008**
 Inspection by: **Beth Biller** Inspection agency: **DEQ-NRO**
 Time spent: **8 hours** Announced: **Yes**
 Reviewed by: **Ed Stuart** Scheduled: **Yes**
 Present at inspection: **Joan Crowther – DEQ; Buckey Dabney – Dabney & Crooks, Inc**

TYPE OF FACILITY:

Domestic

☐ Federal ☐ Major
☒ Nonfederal ☒ Minor

Industrial

☐ Major ☐ Primary
☐ Minor ☐ Secondary

Type of inspection:

☒ Routine
☐ Compliance/Assistance/Complaint
☐ Reinspection

Date of last inspection: **October 12, 2005**
 Agency: **DEQ-NRO**

Population served: **unknown**

Connections served: **72 trailers**

Last month average: (Effluent) Month/year: **December 2007**

Flow	0.0081 MGD	CL2 CCT	0.9 mg/L
pH	7.4 – 7.6 s.u.	CL2 effluent	<QL
DO	8.1 mg/L	CL2 Inst Tech Min	0.9 mg/L
TSS	1.3 mg/L	Ammonia	2.3 mg/L
BOD₅	7 mg/L		

Quarter average: (Effluent) **October, November, December 2007**

Flow	0.0082 MGD	CL2 CCT	0.97 mg/L
pH	6.8 – 7.6 s.u.	CL2 effluent	<QL
DO	7.6 mg/L	CL2 Inst Tech Min	0.97 mg/L
TSS	4.8 mg/L	Ammonia	1.7 mg/L
BOD₅	6.7 mg/L		

DATA VERIFIED IN PREFACE

☒ Updated ☐ No changes

Has there been any new construction?

☐ Yes ☒ No

If yes, were plans and specifications approved?

☐ Yes ☐ No ☒ NA

DEQ approval date: **NA**

(A) PLANT OPERATION AND MAINTENANCE

1. Class and number of licensed operators: I – 1
2. Hours per day plant is manned: 1-2 at minimum
3. Describe adequacy of staffing. ☐ Good ☒ Average ☐ Poor
4. Does the plant have an established program for training personnel? ☒ Yes ☐ No
5. Describe the adequacy of the training program. ☒ Good ☐ Average ☐ Poor
6. Are preventive maintenance tasks scheduled? ☒ Yes ☐ No
7. Describe the adequacy of maintenance. ☒ Good ☐ Average ☐ Poor*
8. Does the plant experience any organic/hydraulic overloading?
If yes, identify cause and impact on plant: ☐ Yes ☒ No
9. Any bypassing since last inspection? ☐ Yes ☒ No
10. Is the standby electric generator operational? ☐ Yes ☐ No* ☒ NA
11. Is the STP alarm system operational? ☐ Yes ☐ No* ☒ NA
12. How often is the standby generator exercised? NA
Power Transfer Switch? NA
Alarm System? NA
13. When was the cross connection control device last tested on the potable water service? **See Comment**
14. Is sludge being disposed in accordance with the approved sludge disposal plan? ☒ Yes ☐ No ☐ NA
15. Is septage received by the facility? ☐ Yes ☒ No
Is septage loading controlled? ☐ Yes ☒ No
Are records maintained? ☐ Yes ☒ No
16. Overall appearance of facility: ☐ Good ☒ Average ☐ Poor

Comments:

11) Facility does not have an alarm system for any unit process.**13) The previous owner was replacing the unit annually; the operator was made aware of the unit at the time of inspection. It is unknown when the last replacement occurred (last documented in 2005).**

(B) PLANT RECORDS

1. Which of the following records does the plant maintain?

Operational Logs for each unit process	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NA
Instrument maintenance and calibration	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NA
Mechanical equipment maintenance	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> NA
Industrial waste contribution (Municipal Facilities)	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> NA

2. What does the operational log contain?

<input checked="" type="checkbox"/> Visual observations	<input checked="" type="checkbox"/> Flow measurement
<input checked="" type="checkbox"/> Laboratory results	<input checked="" type="checkbox"/> Process adjustments
<input type="checkbox"/> Control calculations	<input checked="" type="checkbox"/> Other (specify) Rainfall, operators on duty

3. What do the mechanical equipment records contain?

<input type="checkbox"/> As built plans and specs	<input checked="" type="checkbox"/> Spare parts inventory
<input checked="" type="checkbox"/> Manufacturers instructions	<input checked="" type="checkbox"/> Equipment/parts suppliers
<input checked="" type="checkbox"/> Lubrication schedules	<input type="checkbox"/> Other (specify)

4. What do the industrial waste contribution records contain (Municipal Only)?

<input type="checkbox"/> Waste characteristics	<input type="checkbox"/> Locations and discharge types
<input type="checkbox"/> Impact on plant	<input type="checkbox"/> Other (specify)

Comments:

5. Which of the following records are kept at the plant and available to personnel?

<input checked="" type="checkbox"/> Equipment maintenance records	<input checked="" type="checkbox"/> Operational Log
<input type="checkbox"/> Industrial contributor records	<input checked="" type="checkbox"/> Instrumentation records
<input type="checkbox"/> Sampling and testing records	

6. Records not normally available to plant personnel and their location: **See Comments**

7. Were the records reviewed during the inspection? ☐ Yes ☒ No

8. Are the records adequate and the O & M Manual current? ☒ Yes ☐ No

9. Are the records maintained for the required 3-year time period? ☒ Yes ☐ No

Comments:

6) Records are maintained by Dabney & Crooks Inc.

7) Laboratory records were not reviewed at the time of inspection. Comprehensive review of records will be conducted when the Dabney & Crooks Laboratory inspected.

8) Records were not reviewed during the inspection. The O&M is up to date.

(C) SAMPLING

1. Do sampling locations appear to be capable of providing representative samples? ☒ Yes ☐ No*
2. Do sample types correspond to those required by the VPDES permit? ☒ Yes ☐ No*
3. Do sampling frequencies correspond to those required by the VPDES permit? ☒ Yes ☐ No*
4. Are composite samples collected in proportion to flow? ☐ Yes ☐ No* ☒ NA
5. Are composite samples refrigerated during collection? ☐ Yes ☐ No* ☒ NA
6. Does plant maintain required records of sampling? ☒ Yes ☐ No*
7. Does plant run operational control tests? ☒ Yes ☐ No

(D) TESTING

1. Who performs the testing? ☒ Plant ☐ Central Lab ☒ Commercial Lab

If plant performs any testing, complete 2-4.

2. What method is used for chlorine analysis? **DPD – HACH DR 100**
3. Does plant appear to have sufficient equipment to perform required tests? ☒ Yes ☐ No*
4. Does testing equipment appear to be clean and/or operable? ☒ Yes ☐ No*

(E) FOR INDUSTRIAL FACILITIES WITH TECHNOLOGY BASED LIMITS ONLY

1. Is the production process as described in the permit application? (If no, describe changes in comments)
☐ Yes ☐ No ☒ NA
2. Do products and production rates correspond as provided in the permit application? (If no, list differences)
☐ Yes ☐ No ☒ NA
3. Has the State been notified of the changes and their impact on plant effluent? Date:
☐ Yes ☐ No* ☒ NA

UNIT PROCESS: Screening/Comminution

- | | | | | | |
|----|--|--|---|---|--|
| 1. | Number of Units: | Manual: | 1 | Mechanical: | 0 |
| | Number in operation: | Manual: | 1 | Mechanical: | 0 |
| 2. | Bypass channel provided: | | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No* | |
| | Bypass channel in use: | | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input checked="" type="checkbox"/> NA |
| 3. | Area adequately ventilated: | | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No* | |
| 4. | Alarm system for equipment failure or overloads: | | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No* | |
| 5. | Proper flow distribution between units: | | <input type="checkbox"/> Yes | <input type="checkbox"/> No | <input checked="" type="checkbox"/> NA |
| 6. | How often are units checked and cleaned? | | Daily | | |
| 7. | Cycle of operation: | | Continuous | | |
| 8. | Volume of screenings removed: | | Varies | | |
| 9. | General condition: | <input checked="" type="checkbox"/> Good | <input type="checkbox"/> Fair | <input type="checkbox"/> Poor | |

Comments:

8) Screenings are removed and hauled to a dumpster onsite.

- **Comminutor failed week of 2/15/08 – a replacement has been ordered and will be installed as soon as it arrives.**

UNIT PROCESS: Activated Sludge Aeration

1. Number of units: **1** In operation: **1**
2. Mode of operation: **Extended Aeration**
3. Proper flow distribution between units: ☐ Yes ☐ No* ☒ NA
4. Foam control operational: ☐ Yes ☐ No* ☒ NA
5. Scum control operational: ☐ Yes ☐ No* ☒ NA
6. Evidence of following problems:
- | | | |
|-----------------------------------|-------------------------------|--|
| a. dead spots | <input type="checkbox"/> Yes* | <input checked="" type="checkbox"/> No |
| b. excessive foam | <input type="checkbox"/> Yes* | <input checked="" type="checkbox"/> No |
| c. poor aeration | <input type="checkbox"/> Yes* | <input checked="" type="checkbox"/> No |
| d. excessive aeration | <input type="checkbox"/> Yes* | <input checked="" type="checkbox"/> No |
| e. excessive scum | <input type="checkbox"/> Yes* | <input checked="" type="checkbox"/> No |
| f. aeration equipment malfunction | <input type="checkbox"/> Yes* | <input checked="" type="checkbox"/> No |
| g. other (identify in comments) | <input type="checkbox"/> Yes* | <input checked="" type="checkbox"/> No |
7. Mixed liquor characteristics (as available):
- MLSS: **3100 mg/L**
- DO: **2.0-2.1 mg/L**
- Color: **Chocolate Brown**
- Odor: **None**
8. Return/waste sludge:
- | | |
|--------------------------|-------------------------------|
| a. Return Rate: | varies |
| b. Waste Rate: | varies |
| c. Frequency of Wasting: | weekly to holding tank |
9. Aeration system control: ☐ Time Clock ☐ Manual ☒ Continuous ☐ Other (explain)
10. Effluent control devices working properly (oxidation ditches): ☐ Yes ☐ No* ☒ NA
11. General condition: ☒ Good ☐ Fair ☐ Poor

Comments:

UNIT PROCESS: Sedimentation☐ Primary☒ Secondary☐ Tertiary

1. Number of units: **1** In operation: **1**
2. Proper flow distribution between units: ☐ Yes ☐ No* ☒ NA
3. Signs of short circuiting and/or overloads: ☐ Yes ☒ No
4. Effluent weirs level: ☒ Yes ☐ No*
Clean: **Once per week** ☒ Yes ☐ No*
5. Scum collection system working properly: ☒ Yes ☐ No* ☐ NA
6. Sludge collection system working properly: ☒ Yes ☐ No*
7. Influent, effluent baffle systems working properly: ☒ Yes ☐ No*
8. Chemical addition: ☐ Yes ☒ No
Chemicals:
9. Effluent characteristics: **Clear, no odor**
10. General condition: ☒ Good ☐ Fair ☐ Poor

Comments:

5-6) Returns to the head of the plant.

UNIT PROCESS: Chlorination

- | | | | |
|--|--|--|--|
| 1. No. of chlorinators: | 1 | In operation: | 1 |
| 2. No. of evaporators: | 0 | In operation: | 0 |
| 3. No. of chlorine contact tanks: | 1 | In operation: | 1 |
| 4. Proper flow distribution between units: | <input type="checkbox"/> Yes <input type="checkbox"/> No* <input checked="" type="checkbox"/> NA | | |
| 5. How is chlorine introduced into the wastewater? | | | |
| <input type="checkbox"/> Perforated diffusers | | | |
| <input checked="" type="checkbox"/> Injector with single entry point | | | |
| <input type="checkbox"/> Other | | | |
| 6. Chlorine residual in basin effluent: | not checked at the time of inspection | | |
| 7. Applied chlorine dosage: | varies | | |
| 8. Contact basins adequately baffled: | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No* | | |
| 9. Adequate ventilation: | | | |
| a. cylinder storage area | <input type="checkbox"/> Yes | <input type="checkbox"/> No* | <input checked="" type="checkbox"/> NA |
| b. equipment room | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No* | |
| 10. Proper safety precautions used: | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No* | | |
| 11. General condition: | <input type="checkbox"/> Good | <input checked="" type="checkbox"/> Fair | <input type="checkbox"/> Poor |

Comments:

- **A 12.5 % chlorine solution is purchased and diluted 1:5 with water.**
- **The CCT is a plug flow design.**
- **The storage building is experiencing power issues – staff is looking into ways of preventing power cord overheats**

UNIT PROCESS: Dechlorination

1. Chemical used: ☐ Sulfur Dioxide ☐ Bisulfite ☒ Other
2. No. of sulfonators: **0** In operation: **0**
3. No. of evaporators: **0** In operation: **0**
4. No. of chemical feeders: **1** In operation: **1**
5. No. of contact tanks: **0** In operation: **1**
6. Proper flow distribution between units: ☐ Yes ☐ No* ☒ NA
7. How is chemical introduced into the wastewater?
☐ Perforated diffusers
☐ Injector with single entry point
☒ Other: **tablet feeder**
8. Control system operational: ☐ Yes ☐ No* ☒ NA
a. residual analyzers: ☐ Yes ☐ No* ☒ NA
b. system adjusted: ☐ Automatic ☒ Manual ☐ Other:
9. Applied dechlorination dose: **varies with flow**
10. Chlorine residual in basin effluent: **<QL**
11. Contact basins adequately baffled: ☐ Yes ☐ No* ☒ NA
12. Adequate ventilation:
a. cylinder storage area: ☐ Yes ☐ No* ☒ NA
b. equipment room: ☐ Yes ☐ No* ☒ NA
13. Proper safety precautions used: ☒ Yes ☐ No*
14. General condition: ☒ Good ☐ Fair ☐ Poor

Comments:

1) 91.5% Sodium Sulfite tablets are used.

9) The tablet feeders are checked daily and filled about 2 times per week; approximately 7 tablets are used per week.

10) Effluent Cl₂ was measured by Beth Biller @ 1024.

UNIT PROCESS: Post Aeration

1. Number of units: **1** In operation: **1**
2. Proper flow distribution between units: ☐ Yes ☐ No* ☒ NA
3. Evidence of following problems:
 - a. dead spots ☐ Yes* ☒ No
 - b. excessive foam ☐ Yes* ☒ No
 - c. poor aeration ☐ Yes* ☒ No
 - d. mechanical equipment failure ☐ Yes* ☐ No ☒ NA
4. How is the aerator controlled? ☐ Time clock ☐ Manual ☒ Continuous ☐ Other* ☐ NA
5. What is the current operating schedule? **Continuous**
6. Step weirs level: ☐ Yes ☐ No ☒ NA
7. Effluent D.O. level: **9.1 mg/L**
8. General condition: ☒ Good ☐ Fair ☐ Poor

Comments:

7) Effluent DO measured in situ by Beth Biller @ 1020.**UNIT PROCESS: Effluent/Plant Outfall**

1. Type Outfall ☒ Shore based ☐ Submerged
2. Type if shore based: ☐ Wingwall ☐ Headwall ☒ Rip Rap
3. Flapper valve: ☐ Yes ☐ No ☒ NA
4. Erosion of bank: ☐ Yes ☒ No ☐ NA
5. Effluent plume visible? ☐ Yes* ☒ No
6. Condition of outfall and supporting structures: ☒ Good ☐ Fair ☐ Poor*
7. Final effluent, evidence of following problems:
 - a. oil sheen ☐ Yes* ☒ No
 - b. grease ☐ Yes* ☒ No
 - c. sludge bar ☐ Yes* ☒ No
 - d. turbid effluent ☐ Yes* ☒ No
 - e. visible foam ☐ Yes* ☒ No
 - f. unusual color ☐ Yes* ☒ No

Comments:

LABORATORY INSPECTION REPORT SUMMARY

FACILITY NAME: Woodford MHP STP	FACILITY NO: VA0061409	INSPECTION DATE: February 19, 2008
<input type="radio"/> Deficiencies	<input checked="" type="radio"/> No Deficiencies	
LABORATORY RECORDS		
<p>The Laboratory Records section had No Deficiencies noted during the inspection.</p> <p>The operation log was reviewed at the time of inspection.</p>		
GENERAL SAMPLING AND ANALYSIS		
<p>The General Sampling and Analysis section had No Deficiencies noted during the inspection.</p> <p>A written SOP needs to be developed for handling duplicate analysis for pH and TRC.</p>		
LABORATORY EQUIPMENT		
<p>The Laboratory Equipment section had No Deficiencies noted during the inspection.</p>		
INDIVIDUAL PARAMETERS		
pH		
<p>The analysis for the parameter of pH had No Deficiencies noted during the inspection.</p>		
DO		
<p>The analysis for the parameter of Dissolved Oxygen had No Deficiencies noted during the inspection.</p>		
TRC		
<p>The analysis for the parameter of Total Residual Chlorine had No Deficiencies noted during the inspection.</p>		
COMMENTS		
<p>The facility staff should check the DEQ website at http://www.deq.state.va.us/vpdes/checklist.htm and download the most recent inspection check sheets to keep up to date with changes in minimal laboratory requirements.</p>		

**DEPARTMENT OF ENVIRONMENTAL QUALITY - WATER DIVISION
LABORATORY INSPECTION REPORT**

10/01

FACILITY NO: VA0061409	INSPECTION DATE: February 19, 2008	PREVIOUS INSPECTION: September 27, 2005	PREVIOUS EVALUATION: Deficiencies	TIME SPENT: 0.5 hour
NAME/ADDRESS OF FACILITY: Woodford MHP STP 12392 Cousteau Street Woodford, VA 22580		FACILITY CLASS: () MAJOR () MINOR (X) SMALL () VPA/NDC	FACILITY TYPE: (X) MUNICIPAL () INDUSTRIAL () FEDERAL () COMMERCIAL LAB	UNANNOUNCED INSPECTION? () YES (X) NO FY-SCHEDULED INSPECTION? (X) YES () NO
INSPECTOR(S): Beth Biller		REVIEWERS: Ed Stuart	PRESENT AT INSPECTION: Joan Crowther – DEQ; Buckey Dabney	
LABORATORY EVALUATION			DEFICIENCIES?	
			Yes	No
LABORATORY RECORDS				X
GENERAL SAMPLING & ANALYSIS				X
LABORATORY EQUIPMENT				X
DISSOLVED OXYGEN ANALYSIS PROCEDURES				X
pH ANALYSIS PROCEDURES				X
TOTAL RESIDUAL CHLORINE ANALYSIS PROCEDURES				X
QUALITY ASSURANCE/QUALITY CONTROL				
Y/N	QUALITY ASSURANCE METHOD	PARAMETERS	FREQUENCY	
N	REPLICATE SAMPLES			
N	SPIKED SAMPLES			
Y	STANDARD SAMPLES	pH, TRC	Daily, quarterly	
N	SPLIT SAMPLES			
Y	SAMPLE BLANKS	TRC	Daily	
	OTHER			
	EPA-DMR QA DATA?	RATING: () No Deficiency () Deficiency (X) NA		
	QC SAMPLES PROVIDED?	RATING: () No Deficiency () Deficiency (X) NA		

FACILITY #: VA0061409

LABORATORY RECORDS SECTION

LABORATORY RECORDS INCLUDE THE FOLLOWING:

<input checked="" type="checkbox"/>	SAMPLING DATE	<input type="checkbox"/>	ANALYSIS DATE	<input type="checkbox"/>	CONT MONITORING CHART
<input checked="" type="checkbox"/>	SAMPLING TIME	<input checked="" type="checkbox"/>	ANALYSIS TIME	<input checked="" type="checkbox"/>	INSTRUMENT CALIBRATION
<input checked="" type="checkbox"/>	SAMPLE LOCATION	<input type="checkbox"/>	TEST METHOD	<input checked="" type="checkbox"/>	INSTRUMENT MAINTENANCE
				<input type="checkbox"/>	CERTIFICATE OF ANALYSIS

WRITTEN INSTRUCTIONS INCLUDE THE FOLLOWING:

<input checked="" type="checkbox"/>	SAMPLING SCHEDULES	<input type="checkbox"/>	CALCULATIONS	<input checked="" type="checkbox"/>	ANALYSIS PROCEDURES
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	YES	NO	N/A
DO ALL ANALYSTS INITIAL THEIR WORK?	<input checked="" type="checkbox"/>		
DO BENCH SHEETS INCLUDE ALL INFORMATION NECESSARY TO DETERMINE RESULTS?	<input checked="" type="checkbox"/>		
IS THE DMR COMPLETE AND CORRECT? MONTH(S) REVIEWED: January 2008	<input checked="" type="checkbox"/>		
ARE ALL MONITORING VALUES REQUIRED BY THE PERMIT REPORTED?	<input checked="" type="checkbox"/>		

GENERAL SAMPLING AND ANALYSIS SECTION

	YES	NO	N/A
ARE SAMPLE LOCATION(S) ACCORDING TO PERMIT REQUIREMENTS?	<input checked="" type="checkbox"/>		
ARE SAMPLE COLLECTION PROCEDURES APPROPRIATE?	<input checked="" type="checkbox"/>		
IS SAMPLE EQUIPMENT CONDITION ADEQUATE?	<input checked="" type="checkbox"/>		
IS FLOW MEASUREMENT ACCORDING TO PERMIT REQUIREMENTS?	<input checked="" type="checkbox"/>		
ARE COMPOSITE SAMPLES REPRESENTATIVE OF FLOW?			<input checked="" type="checkbox"/>
ARE SAMPLE HOLDING TIMES AND PRESERVATION ADEQUATE?	<input checked="" type="checkbox"/>		
IF ANALYSIS IS PERFORMED AT ANOTHER LOCATION, ARE SHIPPING PROCEDURES ADEQUATE? LIST PARAMETERS AND NAME & ADDRESS OF LAB: BOD, TSS, Ammonia – Dabney & Crooks Laboratory	<input checked="" type="checkbox"/>		

LABORATORY EQUIPMENT SECTION

	YES	NO	N/A
IS LABORATORY EQUIPMENT IN PROPER OPERATING RANGE?	<input checked="" type="checkbox"/>		
ARE ANNUAL THERMOMETER CALIBRATION(S) ADEQUATE?	<input checked="" type="checkbox"/>		
IS THE LABORATORY GRADE WATER SUPPLY ADEQUATE?			<input checked="" type="checkbox"/>
ARE ANALYTICAL BALANCE(S) ADEQUATE?			<input checked="" type="checkbox"/>

ANALYST:	Buckey Dabney	VPDES NO	VA0061409
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Meter: LaMotte DHA 3000

Parameter: Hydrogen Ion (pH)

Method: Electrometric

1/08

METHOD OF ANALYSIS:

X	18 th Edition of Standard Methods -- 4500-H ⁺ B
	21 st or Online Editions of Standard Methods -- 4500-H ⁺ B (00)

pH is a method-defined analyte so modifications are not allowed. [40 CFR Part 136.6]		Y	N
1)	Is a certificate of operator competence or initial demonstration of capability available for <u>each analyst/operator</u> performing this analysis? NOTE: Analyze 4 samples of known pH. May use external source of buffer (different lot/manufacturer than buffers used to calibrate meter). Recovery for each of the 4 samples must be +/- 0.1 SU of the known concentration of the sample. [SM 1020 B.1]	X	
2)	Is the electrode in good condition (no chloride precipitate, scratches, deterioration, etc.)? [2.b/c and 5.b]	X	
3)	Is electrode storage solution in accordance with manufacturer's instructions? [Mfr.]	X	
4)	Is meter calibrated on at least a daily basis using three buffers all of which are at the same temperature? [4.a] NOTE: Follow manufacturer's instructions.	X	
5)	After calibration, is a buffer analyzed as a check sample to verify that calibration is correct? Agreement should be within +/- 0.1 SU. [4.a]	X	
6)	Do the buffer solutions appear to be free of contamination or growths? [3.1]	X	
7)	Are buffer solutions within the listed shelf-life or have they been prepared within the last 4 weeks? [3.a]	X	
8)	Is the cap or sleeve covering the access hole on the reference electrode removed when measuring pH? [Mfr.]	NA	
9)	For meters with ATC that also have temperature display, is the thermometer verified annually? [SM 2550 B.1]	X	
10)	Is temperature of buffer solutions and samples recorded when determining pH? [4.a]	X	
11)	Is sample analyzed within 15 minutes of collections? [40 CFR Part 136]	X	
12)	Is the electrode rinsed and then blotted dry between reading solutions (Disregard if a portion of the next sample analyzed is used as the rinsing solution.)? [4.a]	X	
13)	Is the sample stirred gently at a constant speed during measurement? [4.b]	X	
14)	Does the meter hold a steady reading after reaching equilibrium? [4.b]	X	
15)	Is a duplicate sample analyzed after every 20 samples if citing 18 th or 19 th Edition or daily for 20 th or 21 st Edition? [Part 1020] NOTE: Not required for in situ samples.	NA	
16)	Is the pH of duplicate samples within 0.1SU of the original sample? [Part 1020]	NA	
17)	Is there a written procedure for which result will be reported on DMR (Sample or Duplicate) and is this procedure followed? [DEQ]	See Comments	

COMMENTS:	17) At the time of inspection a written procedure for handling duplicate information was not available. Mr. Dabney was advised to develop and implement a procedure to provide consistency when reporting compliance data.
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ANALYST:	Buckey Dabney	VPDES NO	VA0061409
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Meter: YSI 550

Parameter: Dissolved Oxygen
Method: Membrane Electrode
1/08

METHOD OF ANALYSIS:

X	18 th Edition of Standard Methods – 4500-O G
	21 st or Online Editions of Standard Methods – 4500-O G (01)

DO is a method-defined analyte so modifications are not allowed. [40 CFR Part 136.6]		Y	N
1)	If samples are collected, is collection carried out with a minimum of turbulence and air bubble formation and is the sample bottle allowed to overflow several times its volume? [1.c]	In situ	
2)	Are meter and electrode operable and providing consistent readings? [3]	X	
3)	Is membrane in good condition without trapped air bubbles? [3.b]	X	
4)	Is correct filling solution used in electrode? [Mfr.]	X	
5)	Are water droplets shaken off the membrane prior to calibration? [Mfr.]	X	
6)	Is meter calibrated before use or at least daily? [Mfr. & Part 1020]	X	
7)	Is calibration procedure performed according to manufacturer's instructions? [Mfr.]	X	
8)	Is sample stirred during analysis? [Mfr.]	In situ	
9)	Is the sample analysis procedure performed according to manufacturer's instructions? [Mfr.]	X	
10)	Is meter stabilized before reading D.O.? [Mfr.]	X	
11)	Is electrode stored according to manufacturer's instructions? [Mfr.]	X	
12)	Is a duplicate sample analyzed after every 20 samples if citing 18 th or 19 th Edition or daily if citing 20 th or 21 st Edition? [Part 1020] NOTE: Not required for in situ samples.	In situ	
13)	If a duplicate sample is analyzed, is the reported value for that sampling event the average concentration of the sample and the duplicate? [DEQ]		
14)	If a duplicate sample is analyzed, is the relative percent difference (RPD) ≤ 20? [18 th ed. Table 1020 I; 21 st ed. DEQ]		

ANALYST:	Buckey Dabney	VPDES NO.	VA0061409
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Instrument: HACH DR-100

Parameter: Total Residual Chlorine (TRC)

Method: DPD Colorimetric (HACH Pocket Colorimeter)

1/08

METHOD OF ANALYSIS:

HACH Manufacturer's Instructions (Method 8167) plus an edition of Standard Methods

X	18 th Edition of Standard Methods 4500-Cl G
	21 st Edition of Standard Methods 4500-Cl G (00)

	Y	N
1) Is a certificate of operator competence or initial demonstration of capability available for <u>each analyst/operator</u> performing this analysis? NOTE: Analyze 4 samples of known TRC. Must use a lot number or source that is different from that used to prepare calibration standards. May not use SpecV™. [SM 1020 B.1]	X	
2) Are the DPD PermaChem™ Powder Pillows stored in a cool, dry place? [Mfr.]	X	
3) Are the pillows within the manufacturer's expiration date? [Mfr.]	X	
4) Has buffering capability of DPD pillows been checked annually? (Pillows should adjust sample pH to between 6 and 7) [Mfr.]	X	
5) When pH adjustment is required, is H ₂ SO ₄ or NaOH used? [Hach 11.3.1]	NA	
6) Are cells clean and in good condition? [Mfr.]	X	
7) Is the low range (0.01 mg/L resolution) used for samples containing residuals from 0.2.00 mg/L? [Mfr.]	X	
8) Is calibration curve developed (may use manufacturer's calibration) with daily verification using a high and a low standard? NOTE: May use manufacturer's installed calibration and commercially available chlorine standards for daily calibration verifications. [18 th ed 1020 B.5; 21 st ed 4020 B.2.b]	X	
9) Is the 10-mL cell (2.5-cm diameter) used for samples from 0-2.00 mg/L? [Mfr.]	X	
10) Is meter zeroed correctly by using sample as blank for the cell used? [Mfr.]	X	
11) Is the instrument cap placed correctly on the meter body when the meter is zeroed and when the sample is analyzed? [Mfr.]	X	
12) Is the DPD Total Chlorine PermaChem™ Powder Pillow mixed into the sample? [Hach 11.1]	X	
13) Is the analysis made at least three minutes but not more than six minutes after PermaChem™ Powder Pillow addition? [Hach 11.2]	X	
14) If read-out is flashing [2.20], is sample diluted correctly, and then reanalyzed? [Hach 1.2 & 2.0]	X	
15) Are samples analyzed within 15 minutes of collection? [40 CFR Part 136]	X	
16) Is a duplicate sample analyzed after every 20 samples if citing 18 th Edition [SM 1020 B.6] or daily for 21 st Edition [SM 4020 B.3.c]?	See Comment	
17) If duplicate sample is analyzed, is the relative percent difference (RPD) ≤ 20? [18 th ed. Table 1020 I; 21 st ed. DEQ]		

COMMENTS:	16-17) At the time of inspection duplicate samples were not being analyzed. Mr. Dabney has several questions concerning the duplicate analysis – additional information is provided with this report.
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To: Joan C. Crowther
From: Katie Conaway

Date: October 25, 2011
Subject: Permit Planning Statement for Woodford MHC, LLC
Permit Number: VA0061409

Discharge Type: Municipal, Private
Discharge Flow: 0.025 MGD, Requesting another flow tier 0.04 MGD
Receiving Stream: Motto River, UT
Latitude / Longitude: 38°5'28" / 77°31'11"
Streamcode: 8-XCF
Waterbody: VAN-F19R
Water Quality Standards: Class III, Section 3.
Rivermile: 003.10
Drainage Area: 1.34 mi²

1. Is there monitoring data for the receiving stream?

No.

- If yes, please attach latest summary.
- If no, where is the nearest downstream monitoring station.

The Unnamed Tributary to the Motto River (XCF) flows into the Motto River, which flows into South River. The nearest downstream DEQ monitoring station with ambient data is Station 8-STH004.37, located on South River at the Route 638 bridge crossing. This station is located approximately 7.53 rivermiles downstream from this facility. The following is a monitoring summary for Station 8-STH004.37 as taken from the 2010 Integrated Assessment:

Class III, Section 3.

DEQ ambient water quality monitoring station 8-STH004.37, at Route 638.

E. coli monitoring finds a bacterial impairment, resulting in an impaired classification for the recreation use. The wildlife and aquatic life uses are considered fully supporting. The fish consumption use was not assessed.

2. Is the receiving stream on the current 303(d) list?

No.

- If yes, what is the impairment?

N/A

- Has the TMDL been prepared?

N/A

- If yes, what is the WLA for the discharge?

N/A

- If no, what is the schedule for the TMDL?

N/A

3. If the answer to (2) above is no, is there a downstream 303(d) listed impairment?

Yes. The South River has an impairment. As mentioned above, the Motto River flows into the South River.

- If yes, what is the impairment?

Recreational Use Impairment: Sufficient excursions from the maximum *E. coli* bacteria criterion (3 of 26 samples - 11.5%) were recorded at DEQ's ambient water quality monitoring station (8-STH004.37) at the Route 638 crossing to assess this stream segment as not supporting the recreation use goal for the 2010 water quality assessment.

- Has a TMDL been prepared?

No.

- Will the TMDL include the receiving stream?

No, but the TMDL will consider all upstream point source discharges.

- Is there a WLA for the discharge?

No.

- What is the schedule for the TMDL?

TMDL due by 2016.

4. Is there monitoring or other conditions that Planning/Assessment needs in the permit?

There is a completed downstream TMDL for the aquatic life use impairment for the Chesapeake Bay. However, the Bay TMDL and the WLAs contained within the TMDL are not addressed in this planning statement.

5. Fact Sheet Requirements – Please provide information on other VPDES permits or VADEQ monitoring stations located within a 2 mile radius of the facility. In addition, please provide information on any drinking water intakes located within a 5 mile radius of the facility. Also, please provide a map of the discharge point and any other discharges or monitoring stations within a 2-mile radius of the facility.

There are no DEQ monitoring stations or VPDES permits within a 2 mile radius of this facility. There are no drinking water intakes within a 5 mile radius of this facility.

170D - Ladysmith



FRESHWATER WATER QUALITY CRITERIA / WASTELOAD ALLOCATION ANALYSIS

Facility Name: **Woodford MHC, LLC STP (0.040 MGD)** Permit No.: **VA0061409** Version: **OWP Guidance Memo 00-2011 (8/24/00)**

Receiving Stream: **Motto River, UT**

Stream Information			Stream Flows			Mixing Information			Effluent Information		
Mean Hardness (as CaCO3) =	mg/L		1Q10 (Annual) =	0 MGD		Annual - 1Q10 Mix =	100 %		Mean Hardness (as CaCO3) =	50 mg/L	
90% Temperature (Annual) =	deg C		7Q10 (Annual) =	0 MGD		- 7Q10 Mix =	100 %		90% Temp (Annual) =	25 deg C	
90% Temperature (Wet season) =	deg C		30Q10 (Annual) =	0 MGD		- 30Q10 Mix =	100 %		90% Temp (Wet season) =	15 deg C	
90% Maximum pH =	SU		1Q10 (Wet season) =	0.0063 MGD		Wet Season - 1Q10 Mix =	100 %		90% Maximum pH =	8.3 SU	
10% Maximum pH =	SU		30Q10 (Wet season)	0.043 MGD		- 30Q10 Mix =	100 %		10% Maximum pH =	SU	
Tier Designation (1 or 2) =	1		30Q5 =	0 MGD					Discharge Flow =	0.04 MGD	
Public Water Supply (PWS) Y/N? =	n		Harmonic Mean =	0 MGD							
Trout Present Y/N? =	n										
Early Life Stages Present Y/N? =	y										

Parameter (ug/l unless noted)	Background Conc.	Water Quality Criteria			Wasteload Allocations			Antidegradation Baseline			Antidegradation Allocations			Most Limiting Allocations		
		Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)
Acenaphthene	0	--	--	na	9.9E+02	--	--	na	9.9E+02	--	--	--	--	--	--	na
Acrolein	0	--	--	na	9.3E+00	--	--	na	9.3E+00	--	--	--	--	--	--	na
Acrylonitrile ^c	0	--	--	na	2.5E+00	--	--	na	2.5E+00	--	--	--	--	--	--	na
Aldrin ^c	0	3.0E+00	--	na	5.0E-04	3.0E+00	--	na	5.0E-04	--	--	--	--	3.0E+00	--	na
Ammonia-N (mg/l)	0	4.71E+00	7.75E-01	na	--	4.71E+00	7.75E-01	na	--	--	--	--	--	4.71E+00	7.75E-01	na
Ammonia-N (mg/l) (High Flow)	0	5.84E+01	7.09E+00	na	--	6.76E+01	1.47E+01	na	--	--	--	--	--	6.76E+01	1.47E+01	na
Anthracene	0	--	--	na	4.0E+04	--	--	na	4.0E+04	--	--	--	--	--	--	na
Antimony	0	--	--	na	6.4E+02	--	--	na	6.4E+02	--	--	--	--	--	--	na
Arsenic	0	3.4E+02	1.5E+02	na	--	3.4E+02	1.5E+02	na	--	--	--	--	--	3.4E+02	1.5E+02	na
Barium	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	na
Benzene ^c	0	--	--	na	5.1E+02	--	--	na	5.1E+02	--	--	--	--	--	--	na
Benzidine ^c	0	--	--	na	2.0E-03	--	--	na	2.0E-03	--	--	--	--	--	--	na
Benzo (a) anthracene ^c	0	--	--	na	1.8E-01	--	--	na	1.8E-01	--	--	--	--	--	--	na
Benzo (b) fluoranthene ^c	0	--	--	na	1.8E-01	--	--	na	1.8E-01	--	--	--	--	--	--	na
Benzo (k) fluoranthene ^c	0	--	--	na	1.8E-01	--	--	na	1.8E-01	--	--	--	--	--	--	na
Benzo (a) pyrene ^c	0	--	--	na	1.8E-01	--	--	na	1.8E-01	--	--	--	--	--	--	na
Bis(2-Chloroethyl) Ether ^c	0	--	--	na	5.3E+00	--	--	na	5.3E+00	--	--	--	--	--	--	na
Bis(2-Chloroisopropyl) Ether	0	--	--	na	6.5E+04	--	--	na	6.5E+04	--	--	--	--	--	--	na
Bis 2-Ethylhexyl Phthalate ^c	0	--	--	na	2.2E+01	--	--	na	2.2E+01	--	--	--	--	--	--	na
Bromofom ^c	0	--	--	na	1.4E+03	--	--	na	1.4E+03	--	--	--	--	--	--	na
Butylbenzylphthalate	0	--	--	na	1.9E+03	--	--	na	1.9E+03	--	--	--	--	--	--	na
Cadmium	0	1.8E+00	6.6E-01	na	--	1.8E+00	6.6E-01	na	--	--	--	--	--	1.8E+00	6.6E-01	na
Carbon Tetrachloride ^c	0	--	--	na	1.6E+01	--	--	na	1.6E+01	--	--	--	--	--	--	na
Chlordane ^c	0	2.4E+00	4.3E-03	na	8.1E-03	2.4E+00	4.3E-03	na	8.1E-03	--	--	--	--	2.4E+00	4.3E-03	na
Chloride	0	8.6E+05	2.3E+05	na	--	8.6E+05	2.3E+05	na	--	--	--	--	--	8.6E+05	2.3E+05	na
TRC	0	1.9E+01	1.1E+01	na	--	1.9E+01	1.1E+01	na	--	--	--	--	--	1.9E+01	1.1E+01	na
Chlorobenzene	0	--	--	na	1.6E+03	--	--	na	1.6E+03	--	--	--	--	--	--	na

Parameter (ug/l unless noted)	Background Conc.	Water Quality Criteria				Wasteload Allocations				Antidegradation Baseline				Antidegradation Allocations				Most Limiting Allocations			
		Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH
Chlorodibromomethane ^c	0	--	--	na	1.3E+02	--	--	na	1.3E+02	--	--	--	--	--	--	--	--	--	--	na	1.3E+02
Chloroform	0	--	--	na	1.1E+04	--	--	na	1.1E+04	--	--	--	--	--	--	--	--	--	--	na	1.1E+04
2-Chloronaphthalene	0	--	--	na	1.6E+03	--	--	na	1.6E+03	--	--	--	--	--	--	--	--	--	--	na	1.6E+03
2-Chlorophenol	0	--	--	na	1.5E+02	--	--	na	1.5E+02	--	--	--	--	--	--	--	--	--	--	na	1.5E+02
Chlorpyrifos	0	8.3E-02	4.1E-02	na	--	8.3E-02	4.1E-02	na	--	--	--	--	--	--	--	--	--	8.3E-02	4.1E-02	na	--
Chromium III	0	3.2E+02	4.2E+01	na	--	3.2E+02	4.2E+01	na	--	--	--	--	--	--	--	--	--	3.2E+02	4.2E+01	na	--
Chromium VI	0	1.6E+01	1.1E+01	na	--	1.6E+01	1.1E+01	na	--	--	--	--	--	--	--	--	--	1.6E+01	1.1E+01	na	--
Chromium, Total	0	--	--	1.0E+02	--	--	--	na	--	--	--	--	--	--	--	--	--	--	--	na	--
Chrysene ^c	0	--	--	na	1.8E-02	--	--	na	1.8E-02	--	--	--	--	--	--	--	--	--	--	na	1.8E-02
Copper	0	7.0E+00	5.0E+00	na	--	7.0E+00	5.0E+00	na	--	--	--	--	--	--	--	--	--	7.0E+00	5.0E+00	na	--
Cyanide, Free	0	2.2E+01	5.2E+00	na	1.6E+04	2.2E+01	5.2E+00	na	1.6E+04	--	--	--	--	--	--	--	--	2.2E+01	5.2E+00	na	1.6E+04
DDD ^c	0	--	--	na	3.1E-03	--	--	na	3.1E-03	--	--	--	--	--	--	--	--	--	--	na	3.1E-03
DDE ^c	0	--	--	na	2.2E-03	--	--	na	2.2E-03	--	--	--	--	--	--	--	--	--	--	na	2.2E-03
DDT ^c	0	1.1E+00	1.0E-03	na	2.2E-03	1.1E+00	1.0E-03	na	2.2E-03	--	--	--	--	--	--	--	--	1.1E+00	1.0E-03	na	2.2E-03
Demeton	0	--	1.0E-01	na	--	--	1.0E-01	na	--	--	--	--	--	--	--	--	--	--	1.0E-01	na	--
Diazinon	0	1.7E-01	1.7E-01	na	--	1.7E-01	1.7E-01	na	--	--	--	--	--	--	--	--	--	1.7E-01	1.7E-01	na	--
Dibenz(a,h)anthracene ^c	0	--	--	na	1.8E-01	--	--	na	1.8E-01	--	--	--	--	--	--	--	--	--	--	na	1.8E-01
1,2-Dichlorobenzene	0	--	--	na	1.3E+03	--	--	na	1.3E+03	--	--	--	--	--	--	--	--	--	--	na	1.3E+03
1,3-Dichlorobenzene	0	--	--	na	9.6E+02	--	--	na	9.6E+02	--	--	--	--	--	--	--	--	--	--	na	9.6E+02
1,4-Dichlorobenzene	0	--	--	na	1.9E+02	--	--	na	1.9E+02	--	--	--	--	--	--	--	--	--	--	na	1.9E+02
3,3-Dichlorobenzidine ^c	0	--	--	na	2.8E-01	--	--	na	2.8E-01	--	--	--	--	--	--	--	--	--	--	na	2.8E-01
Dichlorobromomethane ^c	0	--	--	na	1.7E+02	--	--	na	1.7E+02	--	--	--	--	--	--	--	--	--	--	na	1.7E+02
1,2-Dichloroethane ^c	0	--	--	na	3.7E+02	--	--	na	3.7E+02	--	--	--	--	--	--	--	--	--	--	na	3.7E+02
1,1-Dichloroethylene	0	--	--	na	7.1E+03	--	--	na	7.1E+03	--	--	--	--	--	--	--	--	--	--	na	7.1E+03
1,2-trans-dichloroethylene	0	--	--	na	1.0E+04	--	--	na	1.0E+04	--	--	--	--	--	--	--	--	--	--	na	1.0E+04
2,4-Dichlorophenol	0	--	--	na	2.9E+02	--	--	na	2.9E+02	--	--	--	--	--	--	--	--	--	--	na	2.9E+02
2,4-Dichlorophenoxy acetic acid (2,4-D)	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	--	--	na	--
1,2-Dichloropropane ^c	0	--	--	na	1.5E+02	--	--	na	1.5E+02	--	--	--	--	--	--	--	--	--	--	na	1.5E+02
1,3-Dichloropropene ^c	0	--	--	na	2.1E+02	--	--	na	2.1E+02	--	--	--	--	--	--	--	--	--	--	na	2.1E+02
Dieldrin ^c	0	2.4E-01	5.8E-02	na	5.4E-04	2.4E-01	5.8E-02	na	5.4E-04	--	--	--	--	--	--	--	--	2.4E-01	5.8E-02	na	5.4E-04
Diethyl Phthalate	0	--	--	na	4.4E+04	--	--	na	4.4E+04	--	--	--	--	--	--	--	--	--	--	na	4.4E+04
2,4-Dimethylphenol	0	--	--	na	8.5E+02	--	--	na	8.5E+02	--	--	--	--	--	--	--	--	--	--	na	8.5E+02
Dimethyl Phthalate	0	--	--	na	1.1E+06	--	--	na	1.1E+06	--	--	--	--	--	--	--	--	--	--	na	1.1E+06
Di-n-Butyl Phthalate	0	--	--	na	4.5E+03	--	--	na	4.5E+03	--	--	--	--	--	--	--	--	--	--	na	4.5E+03
2,4 Dinitrophenol	0	--	--	na	5.3E+03	--	--	na	5.3E+03	--	--	--	--	--	--	--	--	--	--	na	5.3E+03
2-Methyl-4,6-Dinitrophenol	0	--	--	na	2.8E+02	--	--	na	2.8E+02	--	--	--	--	--	--	--	--	--	--	na	2.8E+02
2,4-Dinitrotoluene ^c	0	--	--	na	3.4E+01	--	--	na	3.4E+01	--	--	--	--	--	--	--	--	--	--	na	3.4E+01
Dioxin 2,3,7,8-tetrachlorodibenzo-p-dioxin	0	--	--	na	5.1E-08	--	--	na	5.1E-08	--	--	--	--	--	--	--	--	--	--	na	5.1E-08
1,2-Diphenylhydrazine ^c	0	--	--	na	2.0E+00	--	--	na	2.0E+00	--	--	--	--	--	--	--	--	--	--	na	2.0E+00
Alpha-Endosulfan	0	2.2E-01	5.6E-02	na	8.9E+01	2.2E-01	5.6E-02	na	8.9E+01	--	--	--	--	--	--	--	--	2.2E-01	5.6E-02	na	8.9E+01
Beta-Endosulfan	0	2.2E-01	5.6E-02	na	8.9E+01	2.2E-01	5.6E-02	na	8.9E+01	--	--	--	--	--	--	--	--	2.2E-01	5.6E-02	na	8.9E+01
Alpha + Beta Endosulfan	0	2.2E-01	5.6E-02	--	--	2.2E-01	5.6E-02	--	--	--	--	--	--	--	--	--	--	2.2E-01	5.6E-02	--	--
Endosulfan Sulfate	0	--	--	na	8.9E+01	--	--	na	8.9E+01	--	--	--	--	--	--	--	--	--	--	na	8.9E+01
Endrin	0	8.6E-02	3.6E-02	na	6.0E-02	8.6E-02	3.6E-02	na	6.0E-02	--	--	--	--	--	--	--	--	8.6E-02	3.6E-02	na	6.0E-02
Endrin Aldehyde	0	--	--	na	3.0E-01	--	--	na	3.0E-01	--	--	--	--	--	--	--	--	--	--	na	3.0E-01

Parameter (ug/l unless noted)	Background Conc.	Water Quality Criteria				Wasteload Allocations				Antidegradation Baseline				Antidegradation Allocations				Most Limiting Allocations			
		Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH
Ethylbenzene	0	--	--	na	2.1E+03	--	--	na	2.1E+03	--	--	--	--	--	--	--	--	--	--	na	2.1E+03
Fluoranthene	0	--	--	na	1.4E+02	--	--	na	1.4E+02	--	--	--	--	--	--	--	--	--	--	na	1.4E+02
Fluorene	0	--	--	na	5.3E+03	--	--	na	5.3E+03	--	--	--	--	--	--	--	--	--	--	na	5.3E+03
Foaming Agents	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	--	--	na	--
Guthion	0	--	1.0E-02	na	--	--	1.0E-02	na	--	--	--	--	--	--	--	--	--	--	1.0E-02	na	--
Heptachlor ^c	0	5.2E-01	3.8E-03	na	7.9E-04	5.2E-01	3.8E-03	na	7.9E-04	--	--	--	--	--	--	--	--	5.2E-01	3.8E-03	na	7.9E-04
Heptachlor Epoxide ^c	0	5.2E-01	3.8E-03	na	3.9E-04	5.2E-01	3.8E-03	na	3.9E-04	--	--	--	--	--	--	--	--	5.2E-01	3.8E-03	na	3.9E-04
Hexachlorobenzene ^c	0	--	--	na	2.9E-03	--	--	na	2.9E-03	--	--	--	--	--	--	--	--	--	--	na	2.9E-03
Hexachlorobutadiene ^c	0	--	--	na	1.8E+02	--	--	na	1.8E+02	--	--	--	--	--	--	--	--	--	--	na	1.8E+02
Hexachlorocyclohexane	0	--	--	na	4.9E-02	--	--	na	4.9E-02	--	--	--	--	--	--	--	--	--	--	na	4.9E-02
Alpha-BHC ^c	0	--	--	na	1.7E-01	--	--	na	1.7E-01	--	--	--	--	--	--	--	--	--	--	na	1.7E-01
Hexachlorocyclohexane	0	9.5E-01	na	na	1.8E+00	9.5E-01	--	na	1.8E+00	--	--	--	--	--	--	--	--	9.5E-01	--	na	1.8E+00
Gamma-BHC ^c (Lindane)	0	--	--	na	1.1E+03	--	--	na	1.1E+03	--	--	--	--	--	--	--	--	--	--	na	1.1E+03
Hexachlorocyclopentadiene	0	--	--	na	3.3E+01	--	--	na	3.3E+01	--	--	--	--	--	--	--	--	--	--	na	3.3E+01
Hexachloroethane ^c	0	--	2.0E+00	na	--	--	2.0E+00	na	--	--	--	--	--	--	--	--	--	--	2.0E+00	na	--
Hydrogen Sulfide	0	--	--	na	1.8E-01	--	--	na	1.8E-01	--	--	--	--	--	--	--	--	--	--	na	1.8E-01
Indeno (1,2,3-cd) pyrene ^c	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	--	--	na	--
Iron	0	--	--	na	9.6E+03	--	--	na	9.6E+03	--	--	--	--	--	--	--	--	--	--	na	9.6E+03
Isophorone ^c	0	--	0.0E+00	na	--	--	0.0E+00	na	--	--	--	--	--	--	--	--	--	--	0.0E+00	na	--
Kepone	0	4.9E+01	5.6E+00	na	--	4.9E+01	5.6E+00	na	--	--	--	--	--	--	--	--	--	4.9E+01	5.6E+00	na	--
Lead	0	--	1.0E-01	na	--	--	1.0E-01	na	--	--	--	--	--	--	--	--	--	--	1.0E-01	na	--
Malathion	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	--	--	na	--
Manganese	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	--	--	na	--
Mercury	0	1.4E+00	7.7E-01	--	--	1.4E+00	7.7E-01	--	--	--	--	--	--	--	--	--	--	1.4E+00	7.7E-01	--	--
Methyl Bromide	0	--	--	na	1.5E+03	--	--	na	1.5E+03	--	--	--	--	--	--	--	--	--	--	na	1.5E+03
Methylene Chloride ^c	0	--	--	na	5.9E+03	--	--	na	5.9E+03	--	--	--	--	--	--	--	--	--	--	na	5.9E+03
Methoxychlor	0	--	3.0E-02	na	--	--	3.0E-02	na	--	--	--	--	--	--	--	--	--	--	3.0E-02	na	--
Mirex	0	--	0.0E+00	na	--	--	0.0E+00	na	--	--	--	--	--	--	--	--	--	--	0.0E+00	na	--
Nickel	0	1.0E+02	1.1E+01	na	4.8E+03	1.0E+02	1.1E+01	na	4.8E+03	--	--	--	--	--	--	--	--	1.0E+02	1.1E+01	na	4.8E+03
Nitrate (as N)	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	--	--	na	--
Nitrobenzene	0	--	--	na	6.9E+02	--	--	na	6.9E+02	--	--	--	--	--	--	--	--	--	--	na	6.9E+02
N-Nitrosodimethylamine ^c	0	--	--	na	3.0E+01	--	--	na	3.0E+01	--	--	--	--	--	--	--	--	--	--	na	3.0E+01
N-Nitrosodiphenylamine ^c	0	--	--	na	6.0E+01	--	--	na	6.0E+01	--	--	--	--	--	--	--	--	--	--	na	6.0E+01
N-Nitrosodi-n-propylamine ^c	0	--	--	na	5.1E+00	--	--	na	5.1E+00	--	--	--	--	--	--	--	--	--	--	na	5.1E+00
Nonylphenol	0	2.8E+01	6.6E+00	--	--	2.8E+01	6.6E+00	na	--	--	--	--	--	--	--	--	--	2.8E+01	6.6E+00	na	--
Parathion	0	6.5E-02	1.3E-02	na	--	6.5E-02	1.3E-02	na	--	--	--	--	--	--	--	--	--	6.5E-02	1.3E-02	na	--
PCB Total ^c	0	--	1.4E-02	na	6.4E-04	--	1.4E-02	na	6.4E-04	--	--	--	--	--	--	--	--	--	1.4E-02	na	6.4E-04
Pentachlorophenol ^c	0	7.7E-03	5.9E-03	na	3.0E+01	7.7E-03	5.9E-03	na	3.0E+01	--	--	--	--	--	--	--	--	7.7E-03	5.9E-03	na	3.0E+01
Phenol	0	--	--	na	8.6E+05	--	--	na	8.6E+05	--	--	--	--	--	--	--	--	--	--	na	8.6E+05
Pyrene	0	--	--	na	4.0E+03	--	--	na	4.0E+03	--	--	--	--	--	--	--	--	--	--	na	4.0E+03
Radionuclides Gross Alpha Activity (pCi/L)	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	--	--	na	--
Beta and Photon Activity (mrem/yr)	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	--	--	na	--
Radium 226 + 228 (pCi/L)	0	--	--	na	4.0E+00	--	--	na	4.0E+00	--	--	--	--	--	--	--	--	--	--	na	4.0E+00
Uranium (ug/l)	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	--	--	--	--	na	--

Parameter (ug/l unless noted)	Background Conc.	Water Quality Criteria			Wasteload Allocations			Antidegradation Baseline			Antidegradation Allocations			Most Limiting Allocations		
		Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)
Selenium, Total Recoverable	0	2.0E+01	5.0E+00	na	4.2E+03	2.0E+01	5.0E+00	na	4.2E+03	--	--	--	--	2.0E+01	5.0E+00	na
Silver	0	1.0E+00	--	na	--	1.0E+00	--	na	--	--	--	--	--	1.0E+00	--	na
Sulfate	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	na
1,1,2,2-Tetrachloroethane ^c	0	--	--	na	4.0E+01	--	--	na	4.0E+01	--	--	--	--	--	--	na
Tetrachloroethylene ^c	0	--	--	na	3.3E+01	--	--	na	3.3E+01	--	--	--	--	--	--	na
Thallium	0	--	--	na	4.7E-01	--	--	na	4.7E-01	--	--	--	--	--	--	na
Toluene	0	--	--	na	6.0E+03	--	--	na	6.0E+03	--	--	--	--	--	--	na
Total dissolved solids	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	na
Toxaphene ^c	0	7.3E-01	2.0E-04	na	2.8E-03	7.3E-01	2.0E-04	na	2.8E-03	--	--	--	--	7.3E-01	2.0E-04	na
Tributyltin	0	4.6E-01	7.2E-02	na	--	4.6E-01	7.2E-02	na	--	--	--	--	--	4.6E-01	7.2E-02	na
1,2,4-Trichlorobenzene	0	--	--	na	7.0E+01	--	--	na	7.0E+01	--	--	--	--	--	--	na
1,1,2-Trichloroethane ^c	0	--	--	na	1.6E+02	--	--	na	1.6E+02	--	--	--	--	--	--	na
Trichloroethylene ^c	0	--	--	na	3.0E+02	--	--	na	3.0E+02	--	--	--	--	--	--	na
2,4,6-Trichlorophenol ^c	0	--	--	na	2.4E+01	--	--	na	2.4E+01	--	--	--	--	--	--	na
2-(2,4,5-Trichlorophenoxy) propionic acid (Silvex)	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	na
Vinyl Chloride ^c	0	--	--	na	--	--	--	na	--	--	--	--	--	--	--	na
Zinc	0	6.5E+01	6.6E+01	na	2.6E+04	6.5E+01	6.6E+01	na	2.6E+04	--	--	--	--	6.5E+01	6.6E+01	na

Notes:

- All concentrations expressed as micrograms/liter (ug/l), unless noted otherwise
- Discharge flow is highest monthly average or Form 2C maximum for Industries and design flow for Municipals
- Metals measured as Dissolved, unless specified otherwise
- "C" indicates a carcinogenic parameter
- Regular WLAs are mass balances (minus background concentration) using the % of stream flow entered above under Mixing Information.
Antidegradation WLAs are based upon a complete mix.
- Antideg. Baseline = (0.25(WQC - background conc.) + background conc.) for acute and chronic
= (0.1(WQC - background conc.) + background conc.) for human health
- WLAs established at the following stream flows: 1Q10 for Acute, 30Q10 for Chronic Ammonia, 7Q10 for Other Chronic, 30Q5 for Non-carcinogens and Harmonic Mean for Carcinogens. To apply mixing ratios from a model set the stream flow equal to (mixing ratio - 1), effluent flow equal to 1 and 100% mix.

Metal	Target Value (SSTV)
Antimony	6.4E+02
Arsenic	9.0E+01
Barium	na
Cadmium	3.9E-01
Chromium III	2.5E+01
Chromium VI	6.4E+00
Copper	2.8E+00
Iron	na
Lead	3.4E+00
Manganese	na
Mercury	4.6E-01
Nickel	6.8E+00
Selenium	3.0E+00
Silver	4.2E-01
Zinc	2.6E+01

Note: do not use QL's lower than the minimum QL's provided in agency guidance

0.040 MGD DISCHARGE FLOW - STREAM MIX PER "Mix.exe"

Discharge Flow Used for WQS-WLA Calculations (MG)				0.040
Stream Flows		Total Mix Flows		
Allocated to Mix (MGD)		Stream + Discharge (MGD)		
Dry Season	Wet Season	Dry Season	Wet Season	
1Q10	0.000	0.006	0.040	0.046
7Q10	0.000	N/A	0.040	N/A
3Q10	0.000	0.043	0.040	0.083
3Q10	0.000	N/A	0.040	N/A
Harm. Mean	0.000	N/A	0.040	N/A
Annual Avg.	0.000	N/A	0.040	N/A
Stream/Discharge Mix Values		Wet Season		
		Dry Season	Wet Season	
1Q10 90th% Temp. Mix (deg C)		25.000	12.959	
3Q10 90th% Temp. Mix (deg C)		25.000	7.229	
1Q10 90th% pH Mix (SU)		8.300	0.866	
3Q10 90th% pH Mix (SU)		8.300	0.286	
1Q10 10th% pH Mix (SU)		0.000	N/A	
7Q10 10th% pH Mix (SU)		0.000	N/A	
Calculated		Formula Inputs		
1Q10 Hardness (mg/L as CaCO3)		50.0	50.0	
7Q10 Hardness (mg/L as CaCO3)		50.0	50.0	

Ammonia - Dry Season - Acute	
90th Percentile pH (SU)	8.300
(7.204 - pH)	-1.096
(pH - 7.204)	1.096
Trout Present Criterion (mg N/l)	3.149
Trout Absent Criterion (mg N/L)	4.715
Trout Present?	n
Effective Criterion (mg N/L)	4.715

Ammonia - Dry Season - Chronic	
90th Percentile Temp. (deg C)	25.000
90th Percentile pH (SU)	8.300
MIN	1.450
MAX	25.000
(7.688 - pH)	-0.612
(pH - 7.688)	0.612
Early LS Present Criterion (mg N)	0.775
Early LS Absent Criterion (mg N)	0.775
Early Life Stages Present?	y
Effective Criterion (mg N/L)	0.775

Ammonia - Wet Season - Acute	
90th Percentile pH (SU)	0.866
(7.204 - pH)	6.338
(pH - 7.204)	-6.338
Trout Present Criterion (mg N/l)	39.000
Trout Absent Criterion (mg N/L)	58.400
Trout Present?	n
Effective Criterion (mg N/L)	58.400

Ammonia - Wet Season - Chronic	
90th Percentile Temp. (deg C)	7.229
90th Percentile pH (SU)	0.286
MIN	2.850
MAX	7.229
(7.688 - pH)	7.402
(pH - 7.688)	-7.402
Early LS Present Criterion (mg N)	7.088
Early LS Absent Criterion (mg N)	11.341
Early Life Stages Present?	y
Effective Criterion (mg N/L)	7.088

0.040 MGD DISCHARGE FLOW - COMPLETE STREAM MIX

Discharge Flow Used for WQS-WLA Calculations (MG)				0.040
Stream Flows		Total Mix Flows		
Allocated to Mix (MGD)		Stream + Discharge (MGD)		
Dry Season	Wet Season	Dry Season	Wet Season	
1Q10	0.000	0.006	0.040	0.046
7Q10	0.000	N/A	0.040	N/A
3Q10	0.000	0.043	0.040	0.083
3Q10	0.000	N/A	0.040	N/A
Harm. Mean	0.000	N/A	0.040	N/A
Annual Avg.	0.000	N/A	0.040	N/A
Stream/Discharge Mix Values		Wet Season		
		Dry Season	Wet Season	
1Q10 90th% Temp. Mix (deg C)		25.000	12.959	
3Q10 90th% Temp. Mix (deg C)		25.000	7.229	
1Q10 90th% pH Mix (SU)		8.300	0.866	
3Q10 90th% pH Mix (SU)		8.300	0.286	
1Q10 10th% pH Mix (SU)		0.000	N/A	
7Q10 10th% pH Mix (SU)		0.000	N/A	
Calculated		Formula Inputs		
1Q10 Hardness (mg/L as CaCO3) =		50.000	50.000	
7Q10 Hardness (mg/L as CaCO3) =		50.000	50.000	

Ammonia - Dry Season - Acute	
90th Percentile pH (SU)	8.300
(7.204 - pH)	-1.096
(pH - 7.204)	1.096
Trout Present Criterion (mg N/l)	3.149
Trout Absent Criterion (mg N/L)	4.715
Trout Present?	n
Effective Criterion (mg N/L)	4.715

Ammonia - Dry Season - Chronic	
90th Percentile Temp. (deg C)	25.000
90th Percentile pH (SU)	8.300
MIN	1.450
MAX	25.000
(7.688 - pH)	-0.612
(pH - 7.688)	0.612
Early LS Present Criterion (mg N)	0.775
Early LS Absent Criterion (mg N)	0.775
Early Life Stages Present?	y
Effective Criterion (mg N/L)	0.775

Ammonia - Wet Season - Acute	
90th Percentile pH (SU)	0.866
(7.204 - pH)	6.338
(pH - 7.204)	-6.338
Trout Present Criterion (mg N/l)	39.000
Trout Absent Criterion (mg N/L)	58.400
Trout Present?	n
Effective Criterion (mg N/L)	58.400

Ammonia - Wet Season - Chronic	
90th Percentile Temp. (deg C)	7.229
90th Percentile pH (SU)	0.286
MIN	2.850
MAX	7.229
(7.688 - pH)	7.402
(pH - 7.688)	-7.402
Early LS Present Criterion (mg N)	7.088
Early LS Absent Criterion (mg N)	11.341
Early Life Stages Present?	y
Effective Criterion (mg N/L)	7.088

Woodford MHC, LLC STP Effluent pH Data January 2010 - November 2011

	Date	pH		Date	pH		Date	pH		Date	pH			
Jan-10	1	8.2	Feb-10	24	8.0	Apr-10	19	7.5	Jun-10	12	8.3			
	2	8.4		25	8.0		20	8.6		13	8.2			
	3	8.4		26	8.0		21	8.0		14	8.3			
	4	7.8		27	8.2		22	7.9		15	8.0			
	5	8.3		28	8.3		23	8.4		16	8.0			
	6	8.3		Mar-10	1		8.4	24		7.9	17	8.1		
	0	8.3			2		8.1	25		7.9	18	8.1		
	8	8.2			3		8.0	26		7.8	19	8.2		
	9	8.3			4		8.1	27		8.0	20	8.4		
	10	8.1			5		8.4	28		8.1	21	8.2		
	11	8.3			6		8.0	29		8.4	22	8.5		
	12	8.1			7		8.1	30		8.0	23	8.0		
	13	8.2			8		8.0	May-10		1	7.8	24	8.4	
	14	8.1			9		8.1			2	8.3	25	8.5	
	15	8.3			10		8.2			3	7.9	26	7.9	
	16	8.2			11		7.9			4	8.9	27	7.6	
	17	8.1			12		7.9			5	8.3	28	7.9	
	18	8.2			13		7.4			6	8.4	29	7.8	
	19	8.0			14		7.8			7	7.8	30	8.8	
	20	8.0			15		7.8			8	7.4	Jul-10	1	7.9
	21	8.1			16		7.5			9	7.4		2	7.9
	22	8.2			17		7.9			10	7.4		3	8.1
	23	8.4			18		7.9			11	8.2		4	8.2
	24	8.5			19		8.0			12	8.3		5	8.5
	25	8.4			20		8.0			13	8.1		6	7.8
	26	8.0			21		8.7			14	8.0		7	8.4
	27	8.3			22		7.9			15	8.1		8	8.7
	28	8.1			23		8.0			16	7.8		9	7.7
	29	8.2			24		7.9			17	8.2		10	7.6
	30	8.2			25		7.9			18	8.3		11	7.7
	31	8.2			26		8.0			19	7.7		12	7.5
Feb-10	1	8.0	Apr-10		27	7.9	20		8.1	13	8.4			
	2	8.4			21	7.8	14		7.7					
	3	8.0			22	8.4	15		7.1					
	4	8.0			23	8.3	16		8.3					
	5	8.2			24	8.4	17		8.5					
	6	8.8		25	8.4	18	8.1							
	7	8.3		26	8.2	19	7.7							
	8	7.9		27	8.2	20	7.3							
	9	7.8		28	8.8	21	8.2							
	10	7.9		29	8.4	22	7.8							
	11	8.1		30	8.7	23	8.3							
	12	8.0		31	8.5	24	7.6							
	13	8.1		Jun-10	8	8.0	25	7.5						
	14	8.2			9	8.2	26	7.5						
	15	8.5			10	8.5	27	7.0						
	16	8.1			11	8.2	28	8.5						
	17	8.1			12	8.2	29	8.0						
	18	8.0			13	8.0	30	8.2						
	19	8.2			14	8.0	31	7.9						
	20	8.3			15	7.9	Aug-10	1	7.6					
	21	8.2			16	8.0		2	7.7					
	22	8.0			17	8.1		3	7.5					
	23	8.1			18	8.5		4	8.1					

Woodford MHC, LLC STP Effluent pH Data January 2010 - November 2011

Aug-10	Date	pH	Sep-10	Date	pH	Nov-10	Date	pH	Jan-11	Date	pH
	5	7.7		28	8.0		21	7.9		14	7.8
	6	8.2		29	8.2		22	7.8		15	7.5
	7	7.6		30	8.0		23	7.7		16	7.6
	8	7.7		1	8.3		24	7.9		17	7.6
	9	7.9		2	8.2		25	7.3		18	7.2
	10	7.8		3	8.0		26	7.5		19	7.5
	11	7.5		4	8.6		27	7.6		20	7.4
	12	7.6		5	8.4		28	7.9		21	7.5
	13	8.2		6	7.9		29	7.6		22	7.5
	14	8.1		7	8.2		30	8.0		23	7.7
	15	8.0		8	8.3	Dec-10	1	7.8		24	7.5
	16	7.7		9	8.2		2	7.7		25	7.5
	17	7.4		10	8.0		3	7.8		26	7.4
	18	7.3		11	7.9		4	8.0		27	7.8
	19	7.7		12	7.9		5	8.0		28	7.6
	20	7.5		13	8.5		6	7.9		29	7.5
	21	7.6		14	8.7		7	8.1		30	7.3
	22	7.6		15	8.2		8	8.2		31	7.3
	23	7.6		16	8.3		9	8.1	Feb-11	1	7.2
	24	7.5		17	8.0		10	8.1		2	7.5
	25	8.7		18	7.7		11	7.9		3	7.7
	26	8.4		19	7.8		12	7.8		4	7.6
	27	8.3		20	8.0		13	7.6		5	7.3
	28	8.2		21	8.2		14	7.9		6	7.3
	29	8.1		22	8.6		15	7.9		7	7.5
	30	8.3		23	8.6		16	8.1		8	7.4
	31	8.2		24	8.6		17	7.6		9	7.2
Sep-10	1	7.5		25	8.2		18	7.8		10	7.2
	2	8.2		26	8.1		19	8.0		11	7.6
	3	8.9		27	8.0		20	7.8		12	7.8
	4	8.5		28	7.7		21	8.1		13	7.7
	5	8.3		29	7.7		22	7.8		14	7.2
	6	8.1		30	8.1		23	8.2		15	7.3
	7	8.2		31	7.9		24	7.9		16	7.4
	8	8.4	Nov-10	1	8.0		25	8.0		17	7.5
	9	8.3		2	7.7		26	8.3		18	7.5
	10	8.4		3	8.8		27	8.1		19	7.5
	11	8.1		4	8.0		28	7.5		20	7.4
	12	8.1		5	8.0		29	7.8		21	7.4
	13	8.2		6	8.5		30	8.2		22	7.2
	14	7.8		7	8.3		31	8.0		23	7.2
	15	8.6		8	8.6	Jan-11	1	8.0		24	7.3
	16	8.3		9	8.2		2	7.9		25	7.4
	17	7.9		10	8.1		3	8.0		26	7.5
	18	8.0		11	7.9		4	7.9		27	7.6
	19	8.2		12	7.8		5	8.1	Mar-11	28	7.4
	20	7.8		13	7.9		6	8.1		1	7.2
	21	8.1		14	7.6		7	8.0		2	7.4
	22	7.8		15	7.8		8	8.1		3	7.5
	23	8.0		16	7.9		9	8.0		4	7.4
	24	7.9		17	8.4		10	8.0		5	7.4
	25	8.1		18	8.3		11	7.7		6	7.3
	26	7.9		19	7.8		12	7.7		7	7.5
	27	8.4		20	7.7		13	7.6		8	7.6

Woodford MHC, LLC STP Effluent pH Data January 2010 - November 2011

Mar-11			May-11			Jun-11			Aug-11		
Date	pH		Date	pH		Date	pH		Date	pH	
9	7.4		2	7.2		25	7.3		18	7.4	
10	7.6		3	7.3		26	7.4		19	7.4	
11	7.5		4	7.4		27	7.2		20	7.4	
12	7.5		5	7.3		28	7.2		21	7.4	
13	7.4		6	7.4		29	7.4		22	7.5	
14	7.6		7	7.5		30	7.7		23	7.4	
15	7.4		8	7.3		1	7.4		24	7.2	
16	7.4		9	7.3		2	7.2		25	7.3	
17	7.4		10	7.4		3	7.3		26	8.2	
18	7.3		11	7.5		4	7.9		27	7.6	
19	7.4		12	7.3		5	7.5		28	7.6	
20	7.5		13	7.3		6	7.5		29	7.6	
21	7.3		14	7.2		7	7.4		30	7.4	
22	7.5		15	7.4		8	7.4		31	7.5	
23	7.5		16	7.4		9	7.7		1	7.3	
24	7.4		17	7.5		10	7.4		2	7.3	
25	7.3		18	7.2		11	7.4		3	7.6	
26	7.7		19	7.4		12	7.5		4	7.5	
27	7.5		20	7.4		13	7.4		5	7.4	
28	7.4		21	7.3		14	7.3		6	7.3	
29	7.3		22	7.3		15	7.3		7	7	
30	7.3		23	7.4		16	8.0		8	7.2	
31	7.3		24	7.3		17	7.7		9	7.3	
1	7.3		25	7.2		18	8.0		10	7.3	
2	7.1		26	7.2		19	7.7		11	7.1	
3	7.3		27	7.4		20	7.5		12	7.2	
4	7.1		28	7.3		21	7.4		13	7.2	
5	7.4		29	7.9		22	7.4		14	7.3	
6	7.3		30	7.4		23	7.4		15	7.3	
7	7.6		31	7.4		24	7.3		16	7.2	
8	7.5		1	7.4		25	7.4		17	7.1	
9	7.4		2	7.4		26	7.5		18	7.1	
10	7.1		3	7.3		27	7.3		19	7.7	
11	7.4		4	7.3		28	7.4		20	7.5	
12	7.5		5	7.3		29	7.7		21	7.5	
13	7.3		6	7.2		30	7.3		22	7.4	
14	7.4		7	7.3		31	7.1		23	7.3	
15	7.6		8	7.4		1	7.1		24	7.2	
16	7.2		9	7.4		2	7.2		25	7.3	
17	7.4		10	7.3		3	7.2		26	7.2	
18	7.7		11	7.2		4	7.1		27	7.3	
19	7.5		12	7.4		5	7.2		28	7.3	
20	7.7		13	7.5		6	7.3		29	7.3	
21	7.4		14	7.4		7	7.0		30	7.5	
22	7.4		15	7.4		8	7.2		1	7.4	
23	7.4		16	7.3		9	6.9		2	7.3	
24	7.3		17	7.3		10	7.4		3	7.2	
25	7.2		18	7.4		11	7.3		4	7.2	
26	7.3		19	7.5		12	7.4		5	7.3	
27	7.4		20	7.6		13	7.2		6	7.6	
28	7.4		21	7.3		14	7.1		7	7.7	
29	7.3		22	7.4		15	7.5		8	7.5	
30	7.4		23	7.4		16	7.5		9	7.4	
1	7.3		24	7.4		17	7.3		10	7.6	

Woodford MHC, LLC STP Effluent pH Data January 2010 - November 2011

	Date	pH	Date	pH	Date	pH	Date	pH
Oct-11	11	7.5						
	12	7.4						
	13	7.3						
	14	7.5						
	15	7.4						
	16	7.4						
	17	7.4						
	18	8.1						
	19	7.7						
	20	7.7						
	21	8						
	22	7.8						
	23	7.9						
	24	8.1						
	25	7.7						
	26	8.1						
	27	8						
	28	8.1						
	29	7.8						
	30	7.6						
	31	7.6						
Nov-11	1	7.6						
	2	7.5						
	3	7.6						
	4	7.9						
	5	7.6						
	6	7.8						
	7	7.7						
	8	7.7						
	9	8.2						
	10	8.3						
	11	8.1						
	12	8.4						
	13	8.3						
	14	7.9						
	15	8						
	16	8.3						
	17	8.2						
	18	8.4						
	19	8						
	20	7.8						
	21	7.7						
	22	7.6						
	23	7.5						
	24	7.3						
	25	7.6						
	26	7.3						
	27	7.3						
	28	7.4						
	29	7.6						
	30	7.8						

90th percentile of pH = 8.3 SU

VaFWIS - Department of Game and Inland Fisheries

38,05,24.0 -77,31,11.0

is the Search Point

Submit

Cancel

Search Point

- ☒ Change to "clicked" map point
☐ Fixed at 38,05,24.0 - 77,31,11.0

Show Position Rings

☒ Yes ☐ No

1 mile and 1/4 mile at the Search Point

Show Search Area

☒ Yes ☐ No

2 Search distance miles radius

Search Point is at map center

Base Map Choices

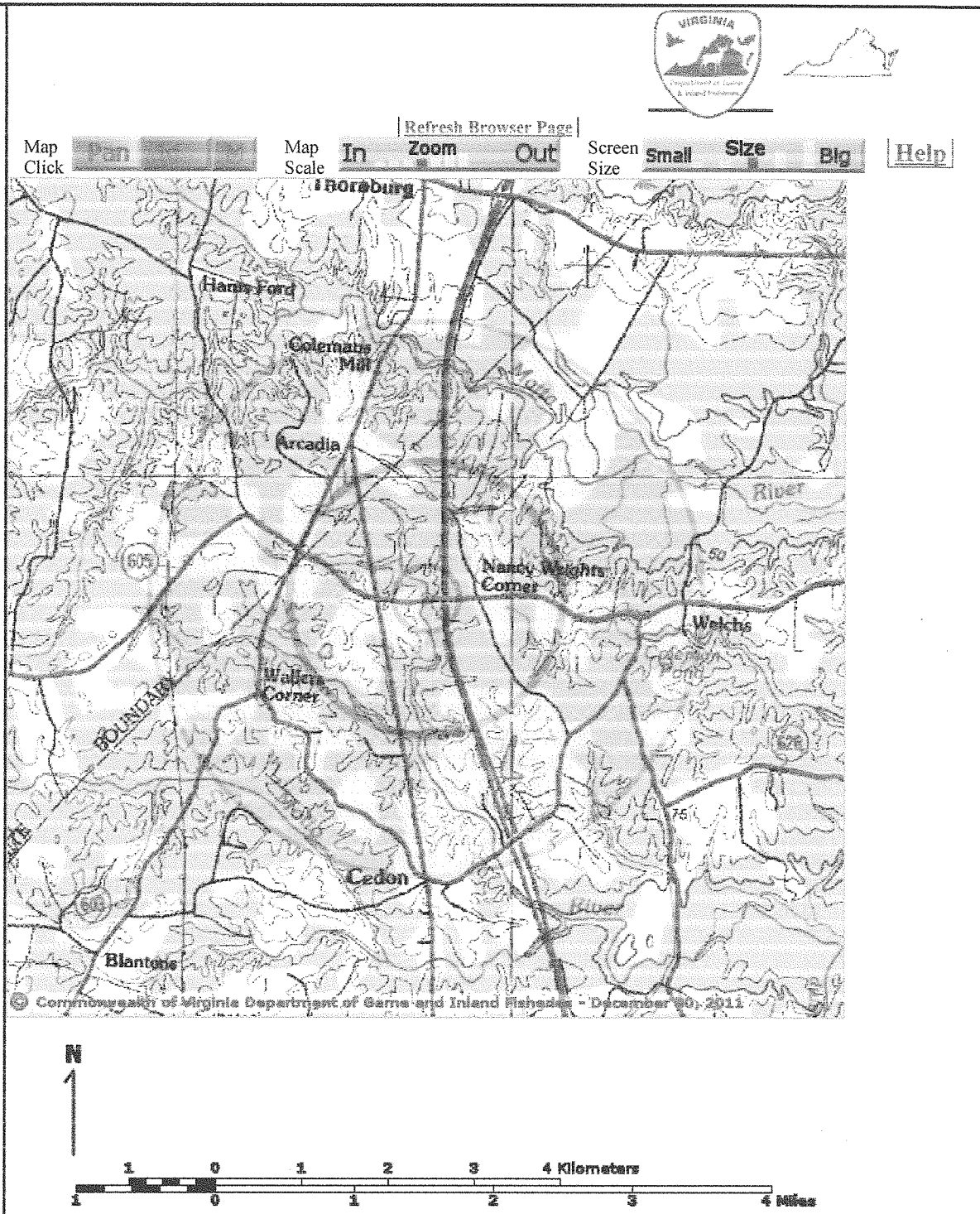
Topography

Map Overlay Choices

Current List: Position, Search

Map Overlay Legend

- ☒ Position Rings
 1 mile and 1/4 mile at the Search Point
☐ 2 mile radius Search Area



Point of Search 38,05,24.0 -77,31,11.0

Map Location 38,05,24.0 -77,31,11.0

Select Coordinate System: ☒ Degrees, Minutes, Seconds Latitude - Longitude

☐ Decimal Degrees Latitude - Longitude

☐ Meters UTM NAD83 East North Zone

☐ Meters UTM NAD27 East North Zone

Base Map source: USGS 1:100,000 topographic maps (see [Microsoft terraserver-usa.com](http://Microsoft.terraserver-usa.com) for details)

Map projection is UTM Zone 18 NAD 1983 with left 274241 and top 4223613. Pixel size is 16 meters. Coordinates displayed are Degrees, Minutes, Seconds North and West. Map is currently displayed as 600 columns by 600 rows for a total of 360000 pixels. The map display represents 9600 meters east to west by 9600 meters north to south for a total of 92.1 square kilometers. The map display represents 31501 feet east to west by 31501 feet north to south for a total of 35.5 square miles.

Topographic maps and Black and white aerial photography for year 1990+-
are from the United States Department of the Interior, United States Geological Survey.
Color aerial photography aquired 2002 is from Virginia Base Mapping Program, Virginia Geographic
Information Network.
Shaded topographic maps are from TOPO! ©2006 National Geographic
<http://www.national.geographic.com/topo>
All other map products are from the Commonwealth of Virginia Department of Game and Inland Fisheries.

map assembled 2011-12-30 12:35:58 (qa/qc December 1, 2011 15:16 - tn=368900 dist=32181)

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VaFWIS Initial Project Assessment Report Compiled on 12/30/2011, 12:38:04 PM

[Help](#)

Known or likely to occur within a **2 mile radius around point 38,05,24.0 -77,31,11.0**
in **033 Caroline County, 177 Spotsylvania County, VA**

[View Map of Site Location](#)

433 Known or Likely Species ordered by Status Concern for Conservation
(displaying first 20) (17 species with Status* or Tier I** or Tier II**)

<u>BOVA Code</u>	<u>Status*</u>	<u>Tier**</u>	<u>Common Name</u>	<u>Scientific Name</u>	<u>Confirmed</u>	<u>Database(s)</u>
060003	FESE	II	<u>Wedgemussel, dwarf</u>	Alasmidonta heterodon		HU6,Habitat
040129	ST	I	<u>Sandpiper, upland</u>	Bartramia longicauda		BOVA
040293	ST	I	<u>Shrike, loggerhead</u>	Lanius ludovicianus		BOVA
040385	ST	I	<u>Sparrow, Bachman's</u>	Aimophila aestivalis		BOVA
040093	FSST	II	<u>Eagle, bald</u>	Haliaeetus leucocephalus		BOVA,HU6
040292	ST		<u>Shrike, migrant loggerhead</u>	Lanius ludovicianus migrans		BOVA
100248	FS	I	<u>Fritillary, regal</u>	Speyeria idalia idalia		BOVA,HU6
060029	FS	III	<u>Lance, yellow</u>	Elliptio lanceolata	<u>Yes</u>	SppObs,HU6
030063	CC	III	<u>Turtle, spotted</u>	Clemmys guttata		BOVA,HU6
010077		I	<u>Shiner, bridle</u>	Notropis bifrenatus	<u>Yes</u>	BOVA,SppObs,HU6,Habitat
040225		I	<u>Sapsucker, yellow-bellied</u>	Sphyrapicus varius		BOVA
040319		I	<u>Warbler, black-throated green</u>	Dendroica virens		BOVA
040052		II	<u>Duck, American black</u>	Anas rubripes		BOVA,HU6
040029		II	<u>Heron, little blue</u>	Egretta caerulea caerulea		BOVA
040105		II	<u>Rail, king</u>	Rallus elegans		BOVA
040320		II	<u>Warbler, cerulean</u>	Dendroica cerulea		BOVA,HU6
040266		II	<u>Wren, winter</u>	Troglodytes troglodytes		BOVA
020005		III	<u>Frog, carpenter</u>	Lithobates virgatipes		BOVA,HU6
020082		III	<u>Siren, eastern lesser</u>	Siren intermedia intermedia		BOVA,HU6
030068		III	<u>Turtle, eastern box</u>	Terrapene carolina carolina		BOVA,HU6

To view **All 433 species** [View 433](#)

* FE=Federal Endangered; FT=Federal Threatened; SE=State Endangered; ST=State Threatened; FC=Federal Candidate;
FS=Federal Species of Concern; CC=Collection Concern

** I=VA Wildlife Action Plan - Tier I - Critical Conservation Need; II=VA Wildlife Action Plan - Tier II - Very High Conservation Need;
III=VA Wildlife Action Plan - Tier III - High Conservation Need; IV=VA Wildlife Action Plan - Tier IV - Moderate Conservation Need

Anadromous Fish Use Streams (1 records)

[View Map of All
Anadromous Fish Use Streams](#)

Stream ID	Stream Name	Reach Status	Anadromous Fish Species			View Map
			Different Species	Highest TE *	Highest Tier **	
P98	Matta river	Potential	0			Yes

Impediments to Fish Passage (2 records)

[View Map of All
Fish Impediments](#)

ID	Name	River	View Map
561	COLEMAN POND DAM	WHITE RUN	Yes
563	TERRELL BROTHERS DAM	TR-MATTA RIVER	Yes

Colonial Water Bird Survey

N/A

Threatened and Endangered Waters

N/A

Managed Trout Streams

N/A

Bald Eagle Concentration Areas and Roosts

N/A

Bald Eagle Nests

N/A

Habitat Predicted for Aquatic WAP Tier I & II Species (2 Reaches)

[View Map Combined Reaches from Below of Habitat Predicted for WAP Tier I & II Aquatic Species](#)

Stream Name	Tier Species						View Map
	Highest TE *	BOVA Code, Status *, Tier **, Common & Scientific Name					
Matta River (20801051)	FESE	010077		I	<u>Shiner, bridle</u>	Notropis bifrenatus	<u>Yes</u>
		060003	FESE	II	<u>Wedgemussel, dwarf</u>	Alasmidonta heterodon	
Matta River (20801051)	FESE	060003	FESE	II	<u>Wedgemussel, dwarf</u>	Alasmidonta heterodon	<u>Yes</u>

Habitat Predicted for Terrestrial WAP Tier I & II Species

N/A

Public Holdings:

N/A

Compiled on 12/30/2011, 12:38:04 PM I368900.0 report= IPA searchType= R dist= 3218 poi= 38,05,24.0 -77,31,11.0

Anadromous=0.059244; BBA=0.136048; BBS=0.05468; BECAR=0.047417; Buffer=2.914503; CBC=0.069432; County=0.114655; HU6=1.065851; Impediments=0.038075; Init=2.945967; PublicLands=0.122203; SppObsSite=0.13715; SppObsSiteOffset=0.150039; TEWaters=0.05884; TierReaches=0.09627; TierTerrestrial=0.163919; Total=5.335099; Trout=0.073019

1/5/2012 11:21:45 AM

Facility = Woodford Wastewater Treatment Plant
Chemical = Ammonia
Chronic averaging period = 30
WLAa = 4.71
WLAc = 0.775
Q.L. = .2
samples/mo. = 1
samples/wk. = 1

Summary of Statistics:

observations = 1
Expected Value = 9
Variance = 29.16
C.V. = 0.6
97th percentile daily values = 21.9007
97th percentile 4 day average = 14.9741
97th percentile 30 day average = 10.8544
< Q.L. = 0
Model used = BPJ Assumptions, type 2 data

A limit is needed based on Chronic Toxicity
Maximum Daily Limit = 1.56369432239764
Average Weekly limit = 1.56369432239764
Average Monthly Limit = 1.56369432239764

The data are: Units of measurement are mg/L.

5/11/2012 1:12:18 PM

Facility = Woodford December - May (using revised Flow Frequency data)
Chemical = Ammonia
Chronic averaging period = 30
WLAa = 67.6
WLAc = 14.7
Q.L. = .2
samples/mo. = 1
samples/wk. = 1

Summary of Statistics:

observations = 1
Expected Value = 9
Variance = 29.16
C.V. = 0.6
97th percentile daily values = 21.9007
97th percentile 4 day average = 14.9741
97th percentile 30 day average = 10.8544
< Q.L. = 0
Model used = BPJ Assumptions, type 2 data

No Limit is required for this material

The data are:

9 Unit of measurement is mg/L.

Analysis of the Minarchi Summer effluent data for Ammonia

The statistics for Ammonia are:

Number of values	=	1
Quantification level	=	.2
Number < quantification	=	0
Expected value	=	10
Variance	=	36.00001
C.V.	=	.6
97th percentile	=	24.33418
Statistics used	=	Reasonable potential assumptions - Type 2 data

The WLAs for Ammonia are:

Acute WLA	=	7.81
Chronic WLA	=	1.26
Human Health WLA	=	----

The limits are based on chronic toxicity and 1 samples/month.

Maximum daily limit	=	1.842844
Average monthly limit	=	1.842844

DATA
10

*Statistical Analysis for Ammonia-Dec-May-
Effluent Limit 7.5mg/l required*

Analysis of the Minarchi - Winter effluent data for Ammonia

The statistics for Ammonia are:

Number of values	=	1
Quantification level	=	.2
Number < quantification	=	0
Expected value	=	10
Variance	=	36.00001
C.V.	=	.6
97th percentile	=	24.33418
Statistics used	=	Reasonable potential assumptions - Type 2 data

The WLAs for Ammonia are:

Acute WLA	=	20.43
Chronic WLA	=	5.1
Human Health WLA	=	----

The limits are based on chronic toxicity and 1 samples/month.

Maximum daily limit	=	7.459132
Average monthly limit	=	7.459132

DATA
10

4/3/2012 2:38:02 PM

Facility = Woodford Wastewater Treatment Plant
Chemical = Total Residual Chlorine
Chronic averaging period = 4
WLAA = 19
WLAC = 11
Q.L. = 100
samples/mo. = 30
samples/wk. = 8

Summary of Statistics:

observations = 1
Expected Value = 200
Variance = 14400
C.V. = 0.6
97th percentile daily values = 486.683
97th percentile 4 day average = 332.758
97th percentile 30 day average = 241.210
< Q.L. = 0
Model used = BPJ Assumptions, type 2 data

A limit is needed based on Chronic Toxicity
Maximum Daily Limit = 16.0883226245855
Average Weekly limit = 9.59676626920107
Average Monthly Limit = 7.9737131838758

The data are: Units of measurement are ug/L.

200

Public Notice – Environmental Permit

PURPOSE OF NOTICE: To seek public comment on a draft permit from the Department of Environmental Quality that will allow the release of treated wastewater into a water body in Caroline County, Virginia.

PUBLIC COMMENT PERIOD: XXX, 2011 to 5:00 p.m. on XXX, 2011

PERMIT NAME: Virginia Pollutant Discharge Elimination System Permit – Wastewater issued by DEQ, under the authority of the State Water Control Board

APPLICANT NAME, ADDRESS AND PERMIT NUMBER: Woodford MHC, LLC, 9073 Nemo Street, West Hollywood, CA 90069, VA0041609

NAME AND ADDRESS OF FACILITY: Woodford MHC, LLC STP, 12392 Cousteau Street, Woodford, VA 22580

PROJECT DESCRIPTION: Woodford MHC, LLC has applied for a reissuance of a permit for the private Woodford MHC, LLC STP. The applicant proposes to release treated sewage wastewaters from residential areas at a rate of 0.040 million gallons per day into a water body. The sludge will be disposed by hauling it to Massponax Wastewater Treatment Plant for disposal. The facility proposes to release treated sewage in the Motto River, UT in Caroline County in the York River Basin watershed. A watershed is the land area drained by a river and its incoming streams. The permit will limit the following pollutants to amounts that protect water quality: pH, cBOD₅, BOD₅, Total Suspended Solids, Total Residual Chlorine, Total Phosphorus, Total Nitrogen, Ammonia, as N, Dissolved Oxygen, Total Kjeldahl Nitrogen, and *E.coli*.

This facility is subject to the requirements of 9 VAC 25-820 and has registered for coverage under the General VPDES Watershed Permit Regulation for Total Nitrogen and Total Phosphorus Discharges and Nutrient Trading in the Chesapeake Watershed in Virginia.

HOW TO COMMENT AND/OR REQUEST A PUBLIC HEARING: DEQ accepts comments and requests for public hearing by e-mail, fax or postal mail. All comments and requests must be in writing and be received by DEQ during the comment period. Submittals must include the names, mailing addresses and telephone numbers of the commenter/requester and of all persons represented by the commenter/requester. A request for public hearing must also include: 1) The reason why a public hearing is requested. 2) A brief, informal statement regarding the nature and extent of the interest of the requester or of those represented by the requestor, including how and to what extent such interest would be directly and adversely affected by the permit. 3) Specific references, where possible, to terms and conditions of the permit with suggested revisions. A public hearing may be held, including another comment period, if public response is significant, based on individual requests for a public hearing, and there are substantial, disputed issues relevant to the permit.

CONTACT FOR PUBLIC COMMENTS, DOCUMENT REQUESTS AND ADDITIONAL INFORMATION: The public may review the documents at the DEQ-Northern Regional Office by appointment, or may request electronic copies of the draft permit and fact sheet.

Name: Joan C. Crowther

Address: DEQ-Northern Regional Office, 13901 Crown Court, Woodbridge, VA 22193

Phone: (703) 583-3925 E-mail: joan.crowther@deq.virginia.gov Fax: (703) 583-3821

**State "Transmittal Checklist" to Assist in Targeting
Municipal and Industrial Individual NPDES Draft Permits for Review**

Part I. State Draft Permit Submission Checklist

In accordance with the MOA established between the Commonwealth of Virginia and the United States Environmental Protection Agency, Region III, the Commonwealth submits the following draft National Pollutant Discharge Elimination System (NPDES) permit for Agency review and concurrence.

Facility Name:	Woodford MHC, LLC STP
NPDES Permit Number:	VA0061409
Permit Writer Name:	Joan C. Crowther
Date:	April 6, 2012

Major []

Minor [x]

Industrial []

Municipal [x]

I.A. Draft Permit Package Submittal Includes:

	Yes	No	N/A
1. Permit Application?	x		
2. Complete Draft Permit (for renewal or first time permit -- entire permit, including boilerplate information)?	x		
3. Copy of Public Notice?	x		
4. Complete Fact Sheet?	x		
5. A Priority Pollutant Screening to determine parameters of concern?	x		
6. A Reasonable Potential analysis showing calculated WQBELs?	x		
7. Dissolved Oxygen calculations?		x	
8. Whole Effluent Toxicity Test summary and analysis?			x
9. Permit Rating Sheet for new or modified industrial facilities?			x

I.B. Permit/Facility Characteristics

	Yes	No	N/A
1. Is this a new, or currently unpermitted facility?		x	
2. Are all permissible outfalls (including combined sewer overflow points, non-process water and storm water) from the facility properly identified and authorized in the permit?	x		
3. Does the fact sheet or permit contain a description of the wastewater treatment process?	x		
4. Does the review of PCS/DMR data for at least the last 3 years indicate significant non-compliance with the existing permit?	x		
5. Has there been any change in streamflow characteristics since the last permit was developed?		x	
6. Does the permit allow the discharge of new or increased loadings of any pollutants?	x		
7. Does the fact sheet or permit provide a description of the receiving water body(s) to which the facility discharges, including information on low/critical flow conditions and designated/existing uses?	x		
8. Does the facility discharge to a 303(d) listed water?		x	
a. Has a TMDL been developed and approved by EPA for the impaired water?		x	
b. Does the record indicate that the TMDL development is on the State priority list and will most likely be developed within the life of the permit?	x		
c. Does the facility discharge a pollutant of concern identified in the TMDL or 303(d) listed water?	x		
9. Have any limits been removed, or are any limits less stringent, than those in the current permit?		x	
10. Does the permit authorize discharges of storm water?		x	

I.B. Permit/Facility Characteristics – cont.	Yes	No	N/A
11. Has the facility substantially enlarged or altered its operation or substantially increased its flow or production? REQUESTED AN INCREASE IN DESIGN FLOW TIER (0.040 MGD)	x		
12. Are there any production-based, technology-based effluent limits in the permit?		x	
13. Do any water quality-based effluent limit calculations differ from the State's standard policies or procedures?		x	
14. Are any WQBELs based on an interpretation of narrative criteria?		x	
15. Does the permit incorporate any variances or other exceptions to the State's standards or regulations?		x	
16. Does the permit contain a compliance schedule for any limit or condition?		x	
17. Is there a potential impact to endangered/threatened species or their habitat by the facility's discharge(s)?		x	
18. Have impacts from the discharge(s) at downstream potable water supplies been evaluated?	x		
19. Is there any indication that there is significant public interest in the permit action proposed for this facility?		x	
20. Have previous permit, application, and fact sheet been examined?	x		

Part II. NPDES Draft Permit Checklist

Region III NPDES Permit Quality Checklist – for POTWs (To be completed and included in the record only for POTWs)

II.A. Permit Cover Page/Administration		Yes	No	N/A
1.	Does the fact sheet or permit describe the physical location of the facility, including latitude and longitude (not necessarily on permit cover page)?	x		
2.	Does the permit contain specific authorization-to-discharge information (from where to where, by whom)?	x		

II.B. Effluent Limits – General Elements		Yes	No	N/A
1.	Does the fact sheet describe the basis of final limits in the permit (e.g., that a comparison of technology and water quality-based limits was performed, and the most stringent limit selected)?	x		
2.	Does the fact sheet discuss whether “antibacksliding” provisions were met for any limits that are less stringent than those in the previous NPDES permit?	x		

II.C. Technology-Based Effluent Limits (POTWs)		Yes	No	N/A
1.	Does the permit contain numeric limits for <u>ALL</u> of the following: BOD (or alternative, e.g., CBOD, COD, TOC), TSS, and pH?	x		
2.	Does the permit require at least 85% removal for BOD (or BOD alternative) and TSS (or 65% for equivalent to secondary) consistent with 40 CFR Part 133?		x	
a.	If no, does the record indicate that application of WQBELs, or some other means, results in more stringent requirements than 85% removal or that an exception consistent with 40 CFR 133.103 has been approved?			x
3.	Are technology-based permit limits expressed in the appropriate units of measure (e.g., concentration, mass, SU)?	x		
4.	Are permit limits for BOD and TSS expressed in terms of both long term (e.g., average monthly) and short term (e.g., average weekly) limits?	x		
5.	Are any concentration limitations in the permit less stringent than the secondary treatment requirements (30 mg/l BOD5 and TSS for a 30-day average and 45 mg/l BOD5 and TSS for a 7-day average)?		x	
a.	If yes, does the record provide a justification (e.g., waste stabilization pond, trickling filter, etc.) for the alternate limitations?			x

II.D. Water Quality-Based Effluent Limits		Yes	No	N/A
1.	Does the permit include appropriate limitations consistent with 40 CFR 122.44(d) covering State narrative and numeric criteria for water quality?	x		
2.	Does the fact sheet indicate that any WQBELs were derived from a completed and EPA approved TMDL?		x	
3.	Does the fact sheet provide effluent characteristics for each outfall?	x		
4.	Does the fact sheet document that a “reasonable potential” evaluation was performed?	x		
a.	If yes, does the fact sheet indicate that the “reasonable potential” evaluation was performed in accordance with the State’s approved procedures?	x		
b.	Does the fact sheet describe the basis for allowing or disallowing in-stream dilution or a mixing zone?	x		
c.	Does the fact sheet present WLA calculation procedures for all pollutants that were found to have “reasonable potential”?	x		
d.	Does the fact sheet indicate that the “reasonable potential” and WLA calculations accounted for contributions from upstream sources (i.e., do calculations include ambient/background concentrations)?	x		
e.	Does the permit contain numeric effluent limits for all pollutants for which “reasonable potential” was determined?	x		

II.D. Water Quality-Based Effluent Limits – cont.	Yes	No	N/A
5. Are all final WQBELs in the permit consistent with the justification and/or documentation provided in the fact sheet?	x		
6. For all final WQBELs, are BOTH long-term AND short-term effluent limits established?	x		
7. Are WQBELs expressed in the permit using appropriate units of measure (e.g., mass, concentration)?	x		
8. Does the record indicate that an “antidegradation” review was performed in accordance with the State’s approved antidegradation policy?	x		

II.E. Monitoring and Reporting Requirements	Yes	No	N/A
1. Does the permit require at least annual monitoring for all limited parameters and other monitoring as required by State and Federal regulations?	x		
a. If no, does the fact sheet indicate that the facility applied for and was granted a monitoring waiver, AND, does the permit specifically incorporate this waiver?			x
2. Does the permit identify the physical location where monitoring is to be performed for each outfall?	x		
3. Does the permit require at least annual influent monitoring for BOD (or BOD alternative) and TSS to assess compliance with applicable percent removal requirements?		x	
4. Does the permit require testing for Whole Effluent Toxicity?		x	


II.F. Special Conditions	Yes	No	N/A
1. Does the permit include appropriate biosolids use/disposal requirements?	x		
2. Does the permit include appropriate storm water program requirements?		x	

II.F. Special Conditions – cont.	Yes	No	N/A
3. If the permit contains compliance schedule(s), are they consistent with statutory and regulatory deadlines and requirements?		x	
4. Are other special conditions (e.g., ambient sampling, mixing studies, TIE/TRE, BMPs, special studies) consistent with CWA and NPDES regulations?			x
5. Does the permit allow/authorize discharge of sanitary sewage from points other than the POTW outfall(s) or CSO outfalls [i.e., Sanitary Sewer Overflows (SSOs) or treatment plant bypasses]?		x	
6. Does the permit authorize discharges from Combined Sewer Overflows (CSOs)?		x	
a. Does the permit require implementation of the “Nine Minimum Controls”?			x
b. Does the permit require development and implementation of a “Long Term Control Plan”?			x
c. Does the permit require monitoring and reporting for CSO events?			x
7. Does the permit include appropriate Pretreatment Program requirements?			x

II.G. Standard Conditions	Yes	No	N/A
1. Does the permit contain all 40 CFR 122.41 standard conditions or the State equivalent (or more stringent) conditions?	x		
List of Standard Conditions – 40 CFR 122.41			
Duty to comply	Property rights	Reporting Requirements	
Duty to reapply	Duty to provide information	Planned change	
Need to halt or reduce activity	Inspections and entry	Anticipated noncompliance	
not a defense	Monitoring and records	Transfers	
Duty to mitigate	Signatory requirement	Monitoring reports	
Proper O & M	Bypass	Compliance schedules	
Permit actions	Upset	24-Hour reporting	
		Other non-compliance	
2. Does the permit contain the additional standard condition (or the State equivalent or more stringent conditions) for POTWs regarding notification of new introduction of pollutants and new industrial users [40 CFR 122.42(b)]?		x	

Part III. Signature Page

Based on a review of the data and other information submitted by the permit applicant, and the draft permit and other administrative records generated by the Department/Division and/or made available to the Department/Division, the information provided on this checklist is accurate and complete, to the best of my knowledge.

Name	<u>Joan C. Crowther</u>
Title	<u>VPDES Permit Writer</u>
Signature	 <u></u>
Date	<u>April 6, 2012</u>